



November 13, 2015

VIA EMAIL: Guzman.Henry@epa.gov
AND FEDERAL EXPRESS

Henry Guzmán, Esq.
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007-1866

Re: Request for Information Pursuant to 42 U.S.C. §9604(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, San Germán Ground Water Contamination Site, San Germán, PR.

Dear Mr. Guzmán:

This letter is in response to EPA's Request for Information letter issued to CCL Label Inc. ("CCL"), dated September 16, 2015, and signed by Nicoletta DiForte in the above referenced matter. CCL and CCL Label (San Germán), Inc. ("CCL San Germán") requested from EPA extensions of time to provide its response to the Request for Information. EPA granted the extensions to respond until November 13, 2015. Therefore, this response is submitted within the term provided.

CCL San Germán currently leases a property owned by the Puerto Rico Industrial Development Company ("PRIDCO") at el Retiro Ward in San Germán, Puerto Rico. The property is identified by PRIDCO in its real estate records and in the lease agreement with CCL San Germán as Project No. S-0551-0-60 & Ext., (the "Facility").

EPA states in the Superfund Program Proposed Plan ("the Plan") for the San Germán Groundwater Contamination Superfund Site (OU-1) (the "Site"), and in other documents in the Administrative Record, that the Facility is one of two sources of contamination of the Site. The other source that EPA identifies is another PRIDCO property identified in PRIDCO's real estate records as Project T-0343-0-56 and T-0261, currently leased by Wallace Silversmith de Puerto Rico Ltd. EPA also states in the Plan that it identified five volatile organic compounds or contaminants related to the Site. These contaminants of concern ("COC") are: (i) PCE; (ii) TCE; (iii) cis-1,2-DCE; (iv) 1,1-DCE; and (v) Vinyl Chloride.

CCL San Germán submitted comments to the Plan during the public comment period. The comments were submitted through letters dated September 11, 2015 and October 23, 2015.

CCL San Germán argued in its comments, based on its best knowledge and on the available information, and on the files and documents provided by PRIDCO, that: (i) any presence of the COC related to the EPA's Site investigation found at the Facility is pre-existing to CCL San Germán occupation of the property and to any of the previous insert printing companies' leases; (ii) the wastes generated by the printing industries that occupied the Facility previous to CCL San Germán, were not hazardous and non-detect for the COC at the time when they leased the Facility; and (iii) EPA cannot discard the possibility that the presence of these COC at the Facility might have been caused by degradation and/or migration from other neighboring properties in the industrial park, and therefore, cannot exclude other tenants in the industrial park whom might have used these COC, as potentially responsible parties.

Notwithstanding the foregoing, and without assuming any responsibility for pre-existing conditions at the Facility or conditions not caused by them, CCL and CCL San Germán are willing to cooperate in good faith with EPA in providing the available information that they have. In this regard, CCL and CCL San Germán provide the following responses to EPA's request for information, based on its best knowledge and available information at the time of submitting this response. CCL and CCL San Germán reserves the right to supplement, amend or correct any of the responses contained herein, if new or additional information is found or obtained.

Please note that the exhibits have been numerated according to the question number. Not all the responses to the questions include an exhibit. Therefore, exhibits will not follow a consecutive numeric sequence.

Question 1

State the correct legal name and mailing address of CCL Label Inc.

Response to question 1:

CCL Label, Inc.,
161 Worcester Road, Suite 502, Framingham, Massachusetts 01701.

Question 2

If CCL Label Inc. wishes to designate an individual for all future correspondence concerning this Site, include any legal notices, please so indicate here by providing that individual's name, address, telephone number, email, and FAX number.

Response to question 2:

Jorge J. García-Díaz
McConnell Valdés LLC
270 Muñoz Rivera Avenue
San Juan, Puerto Rico 00918
(787) 250-5814
(787) 759-9292
Email: jjg@mcvpr.com

Question 3

For CCL Label Inc., please provide:

- a. The date of incorporation;
- b. State of incorporation; and
- c. Agent for service of process.

Response to question 3:

- a. December 1, 1987;
- b. Michigan, USA;
- c. Corporation Service Company.

Question 4

If CCL Label Inc. currently is, or was at any time, a subsidiary or affiliate of another corporation or other business entity, identify each of those entities and each entity's Chief Executive Officer, President, and Chairman of the Board.

Response to question 4:

CCL Label, Inc., is a wholly owned subsidiary of CCL Industries Corporation, a Delaware Corporation, a holding company. The President of CCL Industries Corporation is Geoff Martin. The ultimate parent of CCL Label, Inc., is CCL Industries Inc., a Canadian corporation. The Chairman of CCL Industries Inc., is Donald Lang. The Chief Executive Officer and President of CCL Industries Inc., is Geoff Martin.

Question 5

Explain the nature of the corporate relationship between CCL Label Inc. and the following companies, providing documentation that supports each response:

- a. Insert Corporation of Puerto Rico;
- b. Menasha Insertco Acquisition Company;
- c. Menasha Corporation;
- d. Lucas Insertco Pharmaceutical Printing Co.;
- e. John D. Lucas Printing Co.;
- f. CCL Insertco de Puerto Rico, Inc.; and
- g. CCL Label (San German) Inc.

Kindly provide documents that support your responses.

Response to question 5:

In 2003, CCL Label, Inc. purchased all of the shares of Lucas-Insertco Pharmaceutical Printing Co. of Puerto Rico. See details under the response to Question 6 below. Following is additional information of the entities listed above.

- a. Insert Corporation de P.R. Inc. ("Insertco PR") was a Puerto Rico corporation existing prior to April 13, 1995. See Exhibit 5-A
- b. Menasha Insertco Acquisition Company ("MIAC") was incorporated under the laws of Delaware on January 31, 1995. See Exhibit 5-B. On April 28, 1995, MIAC merged with Insertco PR, surviving MIAC under the name NJP Insertco, Inc. See Exhibit 5-A.
- c. Menasha Corporation has no relationship to CCL Label, Inc. We understand that Menasha Corporation was the parent company of MIAC.
- d. On April 30, 1998, NJP Insertco, Inc. changed its name to Lucas-Insertco Pharmaceutical Printing Co. of Puerto Rico. See Exhibit 5-D.
- e. John D. Lucas Printing Co. has no relationship with CCL Label, Inc. We understand that John D. Lucas Printing Co. was an affiliate of Lucas Insertco Pharmaceutical Printing Co. of Puerto Rico.
- f. On September 9, 2003, Lucas-Insertco Pharmaceutical Printing Co. of Puerto Rico changed its name to CCL Insertco de Puerto Rico, Inc.
- g. On April 18, 2011, CCL Insertco de Puerto Rico, Inc. changed its name to CCL Label (San German) Inc. See Exhibit 5-G.

Question 6

Describe the nature of the acquisition of Lucas Insertco Pharmaceutical Printing Co. by CCL Label Inc., i.e. stock, asset transaction or other type of acquisition.

- a. Describe the nature of the sale and/or transaction of each.

- b. State if the transaction consisted of a merger, consolidation, sale or transfer of assets, and submit all documents relating to such transaction, including all documents pertaining to any agreements, express or implied, for the purchasing corporation to assume the liabilities of the selling corporation.
- c. Did CCL Label Inc. retain the liabilities of Lucas Insertco for events prior to the sale?
- d. Is CCL Label Inc. the successor to any of Lucas Insertco's liabilities, including those under CERCLA?
- e. Describe the nature of CCL Label Inc.'s succession of liabilities for Lucas Insertco and provide the relevant documentation
- f. Did CCL Label Inc. sell or otherwise divest itself of any stock, assets, or other interest in Lucas Insertco?

Response to question 6:

- a. In 2003 CCL Label, Inc. purchased all of the shares of Lucas-Insertco Pharmaceutical Printing Co. of Puerto Rico ("Lucas Insertco"), a Delaware corporation, from Kollman Associates LLC, a Maryland limited liability company. See Section 2.1 of the Share and Membership Rights Purchase Agreement dated June 6, 2003 attached as Exhibit 6 (the "Sale Agreement")
- b. The transaction was a stock sale.
- c. CCL Label, Inc. did not agree to assume the liabilities of Lucas Insertco, other than with respect to certain obligations of Lucas Insertco to Allfirst Bank. See Section 8.6 of the Sale Agreement. In addition, the seller was required to pay and discharge Lucas Insertco's liabilities in the ordinary course of business prior to closing. See Section 6.6(g) of the Sale Agreement.
- d. No. See response c above.
- e. See response c above
- f. No.

Question 7:

Describe the condition of the Facility at the time CCL Label leased the Facility. Provide all available photos and/or documents that would substantiate this.

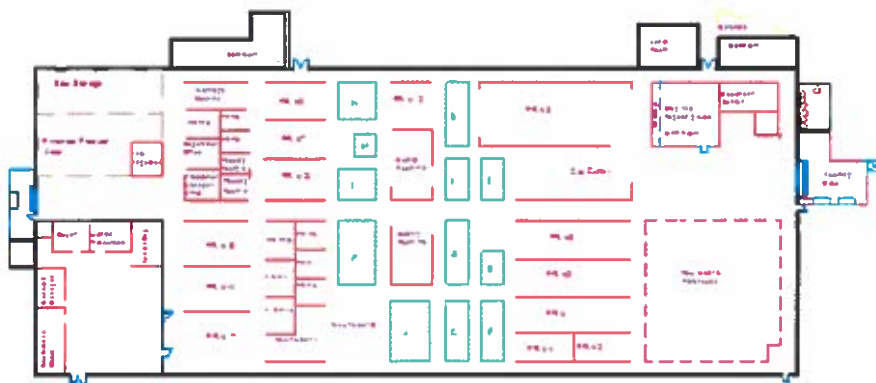
Response to question 7:

At the time CCL Insertco Puerto Rico Inc., leased the Facility, it was in good visually clean condition. However, based on the available documentation, before CCL Insertco Puerto Rico Inc., leased the Facility, Menasha Corporation conducted in March of 1995 a limited Phase II of the Facility for benchmark purposes before NJP Insertco occupied the Facility. Based on the information and documents obtained from PRIDCO's files, the laboratory analysis of said limited

Phase II revealed the presence of the COC at the Facility before any of the printing and label companies occupied it. See Exhibit 7.

The existing building at the Facility consists of an approximate 36,000 square-foot single-story industrial building. The building was originally constructed in the mid-1960s and has been utilized by printing industries for its present purpose since approximately 1996. Below is a layout of the building when it was leased by CCL Insertco Puerto Rico.

CCL Insertco Plant Layout



Question 8

Before CCL Label's lease of the Facility, did CCL Label or any of its agents, officers, or employees enter into any arrangements to investigate the physical and/or environmental conditions at the Facility? If so, please provide copies of all reports, analyses, and characterizations relating to the physical and/or environmental conditions at the Facility.

Response to question 8:

In February of 2003, AMEC Earth & Environmental, Inc., conducted an "Environmental and Pollution Liability Assessment" of the Facility and submitted it to CCL Industries, Inc. See Exhibit 8.

CCL respectfully submits to EPA the following clarifications with respect to certain inaccurate statements contained in said environmental assessment report:

1. Table in Page 3 – states the following: "Hazardous Liquid Wastes Generated" – "Lucas has generated/disposed of the following liquid wastes during calendar year 2002: 900 gallons of residual inks/paints/thinners (commingled)"

We understand that this statement is inaccurate, and must clarify, that based on the available information, there was no hazardous waste generation at the Facility at the time of the report. Also, upon information, belief and available information, the process, inks and chemicals used at the time of the report, and before it by previous printing companies at the Facility, were similar and there was no generation of hazardous waste. Please note that there is a TCLP result in Appendix B of the report showing that the ink waste is non-hazardous and non-detect for the COC. Also, please note that as far back as November of 1995, a TCLP sampling result for the printing or press solution waste (which includes ink) of NJP Insertco, revealed that the waste was non-hazardous and non-detect for the COC. See the TCLP result in appendix D of the Environmental Analysis document included in Exhibit 8-A of this response.

2. Page 17, Section 5.3.11 – States that “Lucas Insertco stores containers of hazardous materials in a covered area along the east side of the main structure (Photograph 4)”.

We must clarify that this statement refers to the raw materials and chemical storage area. Chemicals and other detergents and cleaning solutions are stored in this area for use at the Facility and there is no generation or storage of hazardous waste.

3. Page 21, first bullet at bottom of page – States that “The facility is listed as a conditionally exempt small quantity generator”.

We must clarify that the waste generated at CCL San Germán is not hazardous. We do not know why the Facility was listed at the time of the report as a conditionally exempt small quantity generator. We understand, based on the available information and belief, that any listing of the Facility as such, must be related to a previous tenant before any printing company occupied the Facility.

4. Page 22, Section 7.1.4 Hazardous Waste Storage / Disposal – States that: “Lucas Insertco stores hazardous wastes in an exterior storage area (at the east side of the facility)”. (Sic).

We must clarify that this statement is inaccurate. As mentioned before, there was no hazardous waste generation at the Facility at the time of the report. We believe that the report is referring in that sentence to the raw materials and chemical storage area and not to the ink waste storage area. Note that the report discusses the non-hazardous nature of the waste paint liquid and ink sludge in the next sentence. Please refer also to our clarification in item 1 above in this response.

Question 9

Describe in detail the nature of the business and the production processes conducted by CCL Label at the Facility until present including:

- a. The date such operation commenced and concluded;
- b. The types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each location; and
- c. A description of the generation, storage, placement, disposal, or treatment of wastes at the Facility by date.

Response to question 9:

- a. NJP Insertco, Inc., commenced operations at the Facility on or about 1996 and the operations continue today under the name of CCL Label (San Germán), Inc.
- b. The company supplies printed packaging components to the medical device and pharmaceutical industry. The printed product is delivered as an inserts, outsets and booklets format, generally printed in paper based material. Products are printed in an offset process, using soy based inks. Work performed at the Facility consists of Customer Service receiving a purchase order, specifications and artwork. Customer Service will create a job order, which will be handed to Scheduling. Scheduling will verify raw materials (paper and inks), tolling and equipment availability and enter the job order into a schedule. Quality personnel verify order against customer original order, product specification and approved artwork. Pre-press creates plates from customer artwork and specifications. Order is printed at press area using soy inks. The product is cut to its final size at Cutting. Product is then folded to the final fold size as per customer specification, and product is packaged into its final shipping box. Quality inspects product at all stages (press, cutting and folding and samples are retained from begging, middle and end). The order documentation is verified to assure that all documentation, sampling and testing have been properly completed. Then, the product is released and shipped. See Exhibit 9.
- c. From the offset printing process, wastes are generated in the form of paper, corrugate, aluminum and non-hazardous sludge ink. Regular office waste is generated in the form of office paper and food waste. Paper, corrugate and aluminum are typically stored in containers outside the facility and sent to be recycled. Sludge ink is a non-hazardous residue, originating from the printing process. Sludge ink is generated from inks and water fountain solutions. Sludge ink is stored in two 400 gallon tanks outside the facility in a containment area. The sludge ink waste is disposed by Republic Services at its Allied Waste of Ponce – Ponce Landfill. See Exhibit 9-A. The regular office waste is disposed by Consolidated Waste Services - ConWaste.

Question 10

If there were any changes in the nature of the business and/or the production processes, explain the changes and the dates of such changes.

Response to question 10:

No major changes in the nature of the operation have occurred. Equipment has been updated with newer technology, using same paper, soy based inks and similar chemicals.

Question 11

During the time that CCL Label operated at the Facility, please provide lists for:

- a. All the chemicals that were used at the Facility. Provide the quantity for each chemical that was used on a yearly basis. Relate the use of these chemicals to the manufacturing process;
- b. All wastes that were generated at the Facility. Provide the quantity of each waste that was generated on a yearly basis; and
- c. All chemicals and wastes that were stored at the Facility, the method of storage (e.g., drums, tanks, etc.), and the location of storage.

Response to question 11:

- a. All the chemicals that were used at the Facility. Provide the quantity for each chemical that was used on a yearly basis. Relate the use of these chemicals to the manufacturing process; The following is an estimate of the chemicals used per processes:

Purchase Summary	Manufacture - process	UOM	2011	2012	2013	2014	OCT YTD 2015
Sun Chemical Inks	Press	Pounds	8,600	8,109	9,824	9,352	7,131
Superior Ink	Press	Pounds	6,627	8,008	7,165	7,608	8,943
FUJI FN-6	Pre-press	Gallons	29	22	24	17	22
FUJI LP D3WR	Pre-press	Gallons	85	92	81	92	94
FUJI LP D3W	Pre-press	Gallons	23	6	8	-	8
Velocity plate cleaner	Press	Quarts	118	102	90	85	110
Alkaies	Press	Gallons	55	80	55	110	165
2451 Solution	Press	Gallons	55	100	70	197	55
Varn Wash V-120	Press	Gallons	165	163	200	185	165
Varn 379 (606)	Press	Gallons	55	105	55	-	-
Varn Magesta 606	Press	Gallons	-	-	-	55	55
Orange Wash infinity	Press	Gallons	-	-	-	235	330
Alcohol 99%	Press	Gallons	290	290	185	145	215

The above data consist of products used during the last 5 years, other similar product may have been used for the same process. See Exhibit 11-A.

b. All wastes that were generated at the Facility. Provide the quantity of each waste that was generated on a yearly basis; and

- Non-hazardous sludge ink: Yearly average of 850 Gallons
 - Paper waste generated: Estimate yearly average of 526 Metrics Tons
 - Corrugate: Estimate yearly average of 11 Metric Tons
 - Regular office waste yearly average of 1216 cubic yards
 - Aluminum: Data not available
- See Exhibit 11-B

c. All chemicals and wastes that were stored at the Facility, the method of storage (e.g. drums, tanks, etc.), and the location of storage.

Description	Chemicals stored	UOM	Method of storage
Sun Chemical Inks	450	Pounds	In side facility storage, plastic containers on shelves
Superior Ink	625	Pounds	In side facility storage, plastic containers on shelves
FUJI FN-6	5	Gallons	In side facility storage, plastic containers on shelves
FUJI LP D3WR	15	Gallons	In side facility storage, plastic containers on shelves
FUJI LP D3W	5	Gallons	In side facility storage, plastic containers on shelves
Velocity plate cleaner	14	Quarts	In side facility storage, plastic containers on shelves
Alkaes	55	Gallons	Stored in drums at a self-contained room outside of the facility
2451 Solution	55	Gallons	Stored in drums at a self-contained room outside of the facility
Varn Wash V-120	55	Gallons	Stored in drums at a self-contained room outside of the facility
Varn 379 (606)	0	Gallons	Stored in drums at a self-contained room outside of the facility
Varn Magesta 606	55	Gallons	Stored in drums at a self-contained room outside of the facility
Orange Wash infinity	55	Gallons	Stored in drums at a self-contained room outside of the facility
Alcohol 99%	55	Gallons	Stored in drums at a self-contained room outside of the facility
Non-hazardous sludge ink waste	800	Gallons	Stored in two 400 gallons above ground storage tanks with secondary containment in a covered area outside the building

Question 12

For the time that CCL Label operated at the Facility, explain how any chemical wastes that were generated were disposed of. Provide manifests or shipping papers to document.

Response to question 12:

Non-hazardous "sludge ink" from the offset printing process is generated and stored in two 400 gallon capacity above ground storage tanks and product containers. Ink sludge storage tanks are both within a containment structure. Sludge ink is disposed by Republic Services, Inc. Non-hazardous sludge ink waste is tested periodically and the analytical results are included as well as the disposal manifests. See Exhibit 12.

Question 13

Did CCL Label store or stockpile any industrial wastes at the Facility? Did any of CCL Label's agents, representatives, officers or employees enter into arrangements of any kind relating to the treatment, storage or disposal of industrial wastes? If so, explain all such arrangements, with whom they were made, the chemical names and the appropriate volumes of the industrial wastes, and the time period such arrangements were in effect. Provide copies of all documents that are relevant to your response to these questions.

Response to question 13:

CCL San Germán stores non-hazardous "Sludge ink" waste in two above ground storage tanks of approximately 400 gallons capacity each. The company currently uses Republic Services, Inc. to dispose the sludge ink at the Allied Waste Ponce Landfill. Average yearly volume of sludge ink waste is approximately 850 gallons. See Exhibit 12.

Question 14

Did CCL Label use or install any underground or aboveground storage tanks on the properties? If yes, please provide the answers and all documents that are relevant to your responses:

- a. Please supply the date when they were installed, their size and material of construction, where they were installed, for what purpose, and what chemicals/wastes were stored in them.
- b. Were any of these tanks ever removed or did they ever leak?
- c. Were any of the tanks already present at the Facility prior to CCL Label's operations?

Response to question 14:

CCL San Germán uses 2 PVC 400 gallon above ground storage tanks to store non-hazardous "sludge ink". These tanks have secondary containment and are located outside the building in a roof-covered area.

- a. The tanks are 400 gallons capacity each and are made of PVC. The tanks are used to store the sludge ink waste. The tanks were installed on or about 1998, but the exact date is not known.
- b. One of the above ground storage tanks was replaced with a new one approximately 3 years ago as a result of a small drip from its valve. The dripping was contained in the secondary containment. The company decided to replace the tank instead of fixing the valve as a precautionary measure in order to avoid any potential future dripping from the valve. The replacement date is unknown.
- c. CCL San Germán has not used any pre-existing tanks.

Question 15

During CCL Label's operations at the Facility, describe all leaks, spills, or releases at or from the Facility of materials that were or may have been hazardous, toxic, flammable, reactive, or corrosive, or may have contained hazardous substances, including, but not limited:

- a. The date of each such occurrence:
- b. The specific location at the Facility of each such occurrence; and
- c. The materials that were involved in each such occurrence in terms of the nature, composition, color, smell, and physical state (solid or liquid) of such material.

Response to question 15:

During CCL San German operations at the Facility, the only "leak" was a small dripping of the non-hazardous sludge ink from the valve of one of the two above ground storage tanks located outside the building. The dripping was contained in the secondary containment dike and the tank was replaced with a new one. The date of the dripping and replacement of the tank was approximately 3 years ago.

Question 16

During its operation of the Facility, did CCL Label ever conduct any type of water, soil, or sediment sampling at or near the Facility for purposes of identifying whether there had been a release of any chemical(s) to the environment and/or in compliance with or response to any Federal or Commonwealth environmental regulation(s)? Provide all reports or analytical data that would substantiate this.

Response to question 16:

CCL San Germán has not conducted any type of water, soil or sediment sampling at or near the Facility during its operation thereat, nor has it been required by any Federal or Commonwealth of Puerto Rico environmental agency.

Question 17

During CCL Label's operations at the Facility, were soils remediated, excavated or removed from the Facility'?

- a. If yes, what was the source of the material that was used to backfill the excavation?
- b. Please provide the vendor/location from where the backfill material was obtained and what efforts were taken to determine whether the material was clean.
- c. Detail the effort and provide documentation to substantiate your response including photographs, reports, and analytical data.

Response to question 17:

During CCL San Germán operations at the facility, there has not been any soil remediated, excavated or removed from the Facility.

Question 18

Identify and provide copies of all insurance policies and indemnification agreements held or entered into which arguably could indemnify CCL Label against any liability which it may be found to have under CERCLA for releases and threatened releases of hazardous substances at and from the Site. In response to this request, please provide not only those insurance policies and agreements which currently are in effect, but also include those which were in effect during the years CCL Label's operated at the Facility.

Response to question 18:

CCL holds a Premises Pollution Liability III Insurance Policy issued by Illinois Insurance Company, Policy No. PPL G24876871004 and a Global Premises Pollution Liability Insurance Policy issued by ACE INA Insurance, Policy No. EIL333621. See Exhibits 18 and 18-A, respectively.

PRIDCO's Supplement and Amendment to Lease Contract with Insert Corporation of Puerto Rico, which was dated on August 15th, 1995, with a term of 10 years, included an environmental indemnity clause provision to the benefit of the tenant and to its successors and assigns,

amongst others, for conditions caused before the date of the lease. See clause THIRTEEN "Environmental Protection and Compliance" of Exhibit 18-B. As we have stated before, there is documentation evidencing a pre-existing condition at the Facility before the lease agreement of August of 1995 and before the printing companies leased or occupied the Facility.

Question 19

Provide the name, address, and phone number of all persons that CCL Label employed during the time CCL Label leased at the Facility that would be familiar with CCL Label's operations, waste storage and disposal practices, and any remediation, excavation, or removal of soil from the properties.

Response to question 19:

Ms. Susan Snelgrove, Vice-President, Risk & Environmental Management
CCL Industries Inc.
Suite 500, 105 Gordon Baker Road
Willowdale, Ontario Canada
M2H 3P8
1-416-756-8565

Mr. Mark McClendon – Vice-President and General Counsel
CCL Label Inc.
161 Worcester Road, Suite 502
Framingham, MA 01701
1-440-878-7241

Mr. Dave Joesten, General Manager
1831-D Portal Street
Baltimore, MD 21224
410-558-0236

Mr. Luis D. Perez, Plant Manager
Mr. Roberto Santiago, Quality Manager
Mr. Edgar Cordero, Warehouse and Shipping
El Retiro Industrial Park
Road 302 Km. 33.2
San Germán, Puerto Rico 00683
787-892-1268

Question 20

In the event that you have any additional information or documents which may help EPA identify other companies that may have contributed to contamination in the ground water plume at the San German Ground Water Contamination Site, please provide that information and those documents, and identify the source of your information.

Response to question 20:

This question does not require a response at this time.

Question 21

Please state the name, title and address of each individual who assisted or was consulted in the preparation of your response to this CERCLA Request for Information. In addition, state whether this person has personal knowledge of the information in the answers provided.

Response to question 21:

Mr. Mark McClendon – Vice-President and General Counsel
CCL Label Inc.
161 Worcester Road, Suite 502
Framingham, MA 01701

Ms. Susan Snelgrove, Vice-President, Risk & Environmental Management
CCL Industries Inc.
Suite 500, 105 Gordon Baker Road
Willowdale, Ontario Canada
M2H 3P8

Mr. Luis D. Perez, Plant Manager
Mr. Roberto Santiago, Quality Manager
Mr. Edgar Cordero, Warehouse and Shipping
El Retiro Industrial Park
Road 302 Km. 33.2
San Germán, Puerto Rico 00683

The information provided by the persons above is mostly from the review of available documents and files. In addition, the following persons assisted in the preparation of this response in their capacity as counsel to CCL and CCL San Germán:

Salvador Casellas-Toro
Jorge J García-Díaz
McConnell Valdés LLC
270 Muñoz Rivera Avenue
San Juan, Puerto Rico 00918



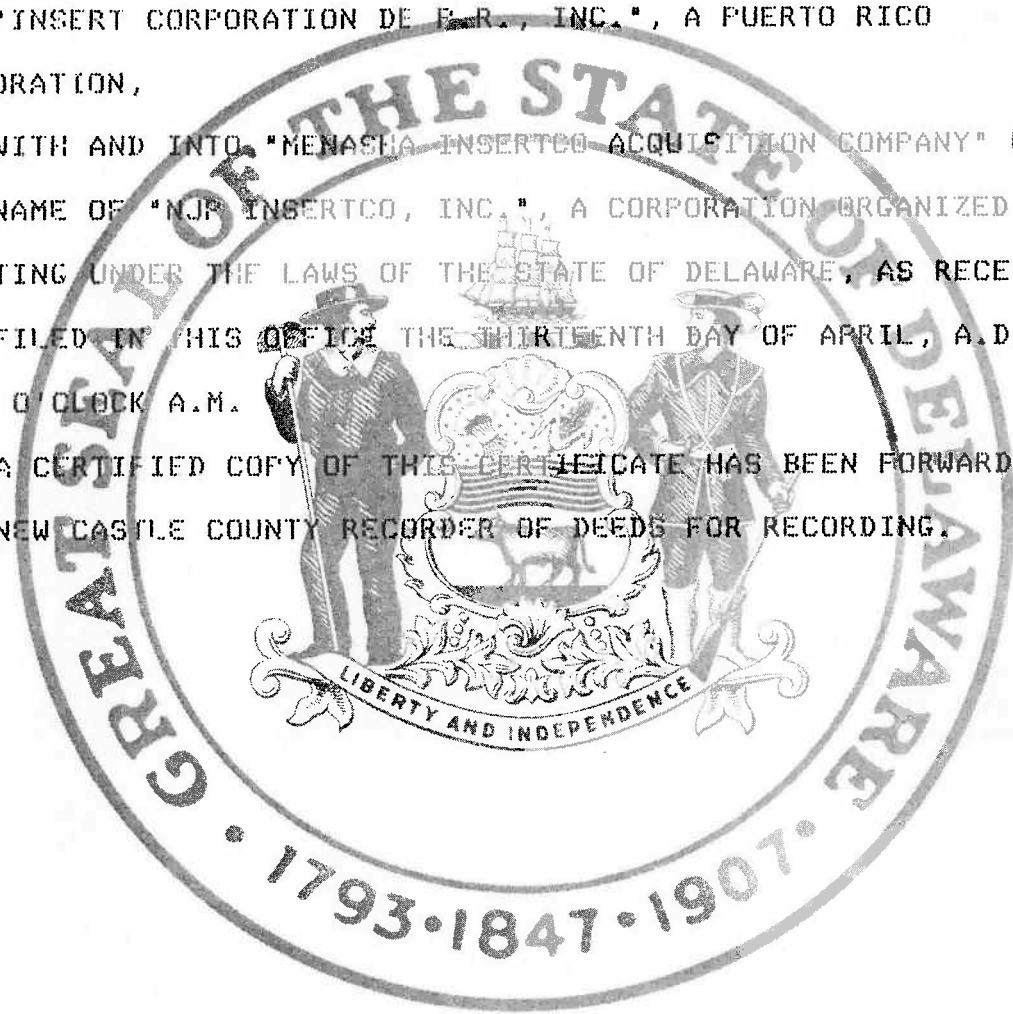
State of Delaware
Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF OWNERSHIP, WHICH MERGES:

"INSERT CORPORATION DE P.R., INC.", A PUERTO RICO CORPORATION,

WITH AND INTO "MENASHA INSERTCO ACQUISITION COMPANY" UNDER THE NAME OF "NJP INSERTCO, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE THE THIRTEENTH DAY OF APRIL, A.D. 1995, AT 9 O'CLOCK A.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

Edward J. Freel, Secretary of State

2476628 8100M

7474596

AUTHENTICATION:

950082807

DATE:

04-18-95

CERTIFICATE OF OWNERSHIP
MERGING
INSERT CORPORATION DE P.R., INC.
INTO
MENASHA INSERTCO ACQUISITION COMPANY

(Pursuant to Section 253 of the General Corporation Law of Delaware.)

Menasha Insertco Acquisition Company, ("MIAC"), a corporation incorporated on the 31st day of January 1995, pursuant to the provisions of the General Corporation Law of the State of Delaware DOES HEREBY CERTIFY that this corporation owns 100% of the capital stock of Insert Corporation de P.R., Inc., a corporation incorporated on the 2nd day of November, 1982, pursuant to the provisions of the General Corporation Law of Puerto Rico, and that this corporation, by a resolution of its Board of Directors duly adopted on the 14th day of March 1995 determined to and did merge into itself said Insert Corporation de P.R., Inc., which resolution is in the following words to wit:

WHEREAS this corporation lawfully owns 100% of the outstanding stock of Insert Corporation de P.R., Inc., a corporation organized and existing under the laws of Puerto Rico, and

WHEREAS this corporation desires to merge into itself the said Insert Corporation de P.R., Inc., and to be possessed of all the estate, property, rights, privileges and franchises of said corporation,

NOW THEREFORE, BE IT

RESOLVED, that this corporation merge into itself, and it does hereby merge into itself said Insert Corporation de P.R., Inc. and assumes all of its liabilities and obligations, and

FURTHER RESOLVED, that the vice-president, and the secretary of this corporation be and they hereby are directed to make and execute, under the corporate seal of this corporation, a certificate of ownership setting forth a copy of the resolution to merge said Insert Corporation de P.R., Inc. and assume its liabilities and obligations, and the date of adoption thereof, and to file the same in the office of the Secretary of State of Delaware, and

FURTHER RESOLVED, that the officers of this corporation be and they hereby are authorized and directed to do all acts and things whatsoever, whether within or without the State of Delaware; which may be in any way necessary or proper to effect said merger, and

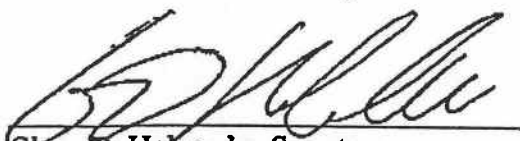
FURTHER RESOLVED, that Menasha Insertco Acquisition Company relinquishes its corporate name and assumes in place thereof the name NJP Insertco, Inc. and Article I of the Certificate of Incorporation shall be amended to read as follows: NJP Insertco, Inc.

IN WITNESS WHEREOF, said Menasha Insertco Acquisition Company has caused its corporate seal to be affixed and this certificate to be signed by William C. Griffith, its Vice President and attested by Glenn D. Holcombe, its Secretary, this 14th day of March, 1995.


William C. Griffith, Vice President


Corporate Seal

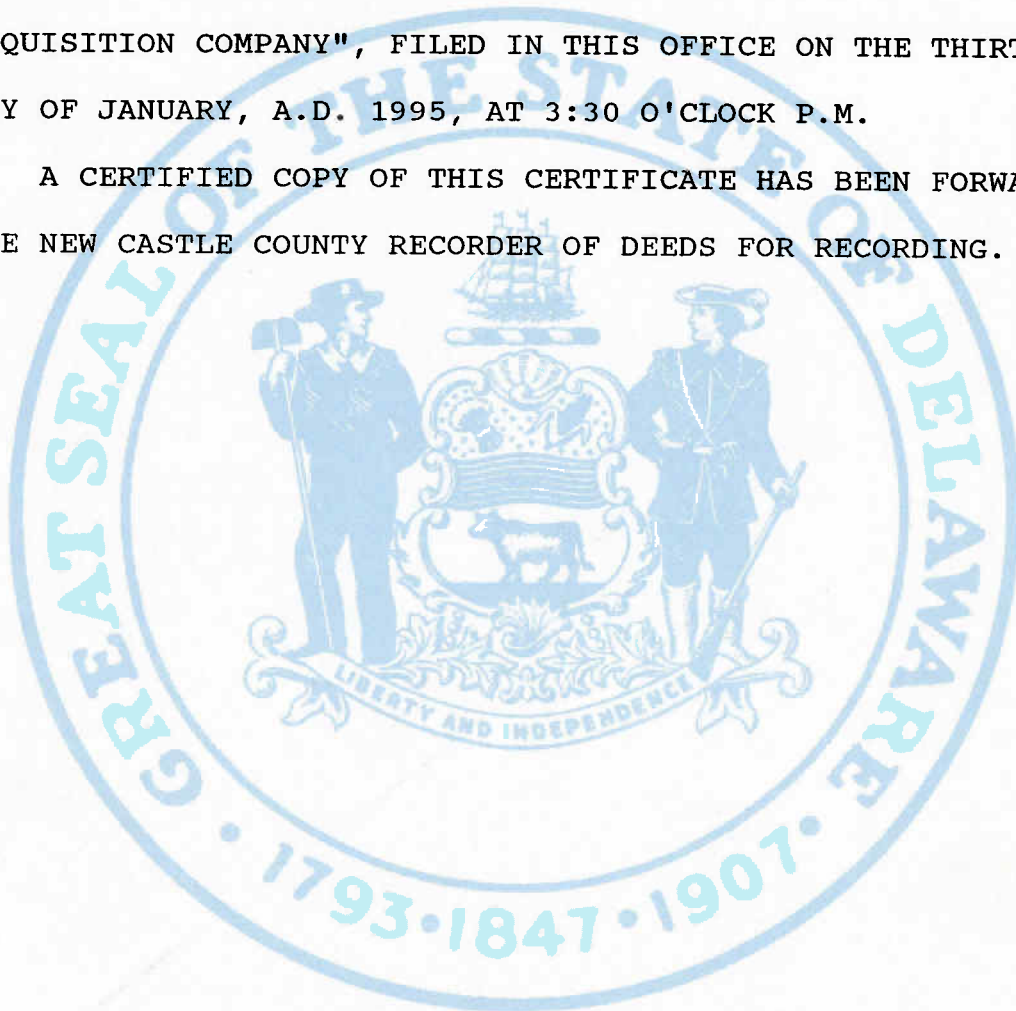
Attest:


Glenn D. Holcombe, Secretary

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF INCORPORATION OF "MENASHA INSERTCO ACQUISITION COMPANY", FILED IN THIS OFFICE ON THE THIRTY-FIRST DAY OF JANUARY, A.D. 1995, AT 3:30 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

Edward J. Freel, Secretary of State

2476628 8100

950023500

AUTHENTICATION:

7392995

DATE:

02-01-95

CERTIFICATE OF INCORPORATION

OF

MENASHA INSERTCO ACQUISITION COMPANY

1. Name. The name of the Corporation is Menasha Insertco Acquisition Company.

2. Registered Office and Agent. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, DE 19801. The name of its registered agent at such address is The Corporation Trust Company.

3. Purpose. The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "DGCL").

4. Authorized Stock. The total number of shares of stock which the Corporation shall have authority to issue is Three Thousand (3,000) shares of Common Stock and the par value of each of such shares is One Dollar (\$1.00) amounting in the aggregate to Three Thousand Dollars (\$3,000).

5. Incorporator. The name and mailing address of the sole incorporator is as follows:

<u>NAME</u>	<u>MAILING ADDRESS</u>
Bruce C. Davidson	411 East Wisconsin Avenue Milwaukee, WI 53202-4497

6. Number of Directors. The number of directors shall be fixed by, or in the manner provided in, the Bylaws.

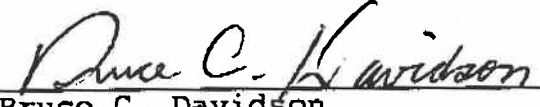
7. Elimination of Certain Liability of Directors. No director of the Corporation shall be held personally liable to the Corporation or its stockholders for monetary damages of any kind for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit.

8. Amendments to Certificate. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now

or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation.

9. Amendments to Bylaws. In furtherance and not in limitation of the powers conferred by the DGCL, the Board of Directors is expressly authorized to make, alter or repeal the Bylaws of the Corporation.

I, THE UNDERSIGNED, being the Incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the DGCL, do make this Certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 31st day of January, 1995.


Bruce C. Davidson
Sole Incorporator

State of Delaware
Office of the Secretary of State PAGE 1

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "NJP INSERTCO, INC.", CHANGING ITS NAME FROM "NJP INSERTCO, INC." TO "LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO. OF PUERTO RICO", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF APRIL, A.D. 1998, AT 11:35 O'CLOCK A.M.



A handwritten signature in cursive script, reading "Edward J. Freel", is written over a horizontal line.

Edward J. Freel, Secretary of State

2476628 8100

981483230

AUTHENTICATION: 9481336

DATE: 12-22-98

STATE of DELAWARE
CERTIFICATE of AMENDMENT of
CERTIFICATE of INCORPORATION

First: That, at a meeting of the Board of Directors of NJP INSERTCO, INC., a Delaware corporation ("Corporation"), resolutions were duly adopted setting forth a proposed amendment of the Certificate of Incorporation of the Corporation, declaring said proposed amendment to be advisable, and calling a special meeting of the stockholders of the Corporation for consideration thereof, the aforesaid resolution setting forth the proposed amendment as follows:

Resolved: That the Certificate of Incorporation of NJP INSERTCO, INC., a Delaware corporation, be amended by changing the Article thereof numbered "1." so that, as amended, said Article shall be and read as follows:

1. *Name.* The name of the Corporation is LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO. OF PUERTO RICO.

Second: That thereafter, pursuant to a resolution of the Board of Directors of the Corporation, a special meeting of the stockholders of the Corporation was duly called and held, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware, at which special meeting the necessary number of shares as required by statute were voted in favor of the proposed amendment.

Third: That the proposed amendment was duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Fourth: That the capital of the Corporation shall not be reduced under or by reason of the aforesaid amendment.

In Witness Whereof, the Corporation has caused this certificate to be signed on its behalf by an authorized officer on this 28 day of April, A.D. 1998.

By: 

Theresa A. Kollman,
Vice President and Secretary

Delaware

PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "CCL INSERTCO DE PUERTO RICO, INC.", CHANGING ITS NAME FROM "CCL INSERTCO DE PUERTO RICO, INC." TO "CCL LABEL (SAN GERMAN), INC.", FILED IN THIS OFFICE ON THE EIGHTEENTH DAY OF APRIL, A.D. 2011, AT 4:55 O'CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

2476628 8100

110427632




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 8704207

DATE: 04-19-11

STATE OF DELAWARE
CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION

CCL Insertco de Puerto Rico, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the Board of Directors of said corporation, by the unanimous written consent of its members, filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of CCL Insertco de Puerto Rico, Inc. be amended by changing the Article thereof numbered "1." so that, as amended, said Article shall be and read as follows:


"The name of the corporation is CCL Label (San German), Inc."

SECOND: That in lieu of a meeting and vote of stockholders, the stockholders have given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said corporation has caused this certificate to be signed by Bohdan I. Sirota, its Secretary, this 18th day of April, 2011.

CCL INSERTCO DE PUERTO RICO, INC.

By: 
Bohdan I. Sirota
Secretary

SHARE AND MEMBERSHIP RIGHTS PURCHASE AGREEMENT

THIS AGREEMENT made the 6th day of June, 2003

AMONG:

KOLLMAN & ASSOCIATES, LLC,
a limited liability company established under
the laws of the State of Maryland,
(hereinafter called the "Vendor"),

OF THE FIRST PART,

- and -

CCL LABEL, INC.,
a corporation incorporated under the laws of
the State of Michigan,
(hereinafter called the "Purchaser"),

OF THE SECOND PART,

- and -

**LUCAS-INSERTCO PHARMACEUTICAL PRINTING
COMPANY OF MARYLAND LLC,**
a limited liability company established under the laws of
the State of Maryland,
(hereinafter called "Lucas"),

OF THE THIRD PART,

- and -

**LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO.
OF PUERTO RICO,**
a corporation incorporated under the laws of
the State of Delaware,
(hereinafter called "Lucas PR")

OF THE FOURTH PART,

- and -

NICHOLAS J. KOLLMAN,
as the Trustee of the Kevin J. Kollman Family Trust,
(hereinafter the "Trust")

OF THE FIFTH PART,

-and-

NICHOLAS J. KOLLMAN,
an individual residing in Stuart, Florida,
(a party for the limited purposes described in Sections 4.3 and
10.9)

OF THE SIXTH PART,

-and-

KEVIN J. KOLLMAN,
an individual residing in York, Pennsylvania,
(a party for the limited purposes described in Sections 4.3 and
10.9)

OF THE SEVENTH PART.

WHEREAS Lucas and Lucas PR carry on the business of selling, marketing and printing inserts, outserts, topserts, booklets and pads for customers in the pharmaceutical industry;

AND WHEREAS the Vendor has agreed to sell, assign and transfer to the Purchaser and the Purchaser has agreed to purchase from the Vendor the Purchased Shares and the Purchased Membership Rights (as defined hereafter) on the terms and subject to the conditions hereinafter set forth;

AND WHEREAS the Trust, Nicholas J. Kollman and Kevin J. Kollman are the registered owners of 92.50% of the membership interests (and all of the voting interests) in the Vendor and are entering into this Agreement in order to make certain representations, warranties and covenants to the Purchaser as an inducement for the Purchaser to enter into this Agreement.

THIS AGREEMENT WITNESSES THAT in consideration of the respective covenants, agreements, representations, warranties and indemnities herein contained and for other good and valuable consideration (the receipt and sufficiency of which are acknowledged by each party), the parties, intending to be legally bound, covenant and agree as follows:

1. INTERPRETATION

1.1 **Defined Terms.** For the purpose of this Agreement, the following terms shall have the respective meanings set out below and grammatical variations of such terms shall have corresponding meanings:

- (a) **"Affiliate"** shall mean any individual, partnership, limited liability company, corporation, trust or other entity or association, directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with a party hereto. The term "control", as used in the immediately preceding sentence, means, with respect to a corporation or limited liability company, the right to exercise, directly or indirectly, more than fifty percent (50%) of the voting rights attributable to the controlled corporation or limited liability company, and, with respect to any individual, partnership, trust, other entity or association, the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of the controlled entity;
- (b) **"Allfirst Indebtedness"** has the meaning set out in Section 8.6;
- (c) **"Business"** means the business currently and heretofore carried on by Lucas and Lucas PR consisting primarily of selling, marketing and printing inserts, outserts, topserts, booklets and pads for customers in the pharmaceutical industry;
- (d) **"Business Day"** means any day, other than a Saturday, a Sunday or a federal or state statutory holiday in Baltimore, Maryland;
- (e) **"Claim"** has the meaning set out in Section 10.3;
- (f) **"Claim Period"** has the meaning set out in Section 2.6(a);
- (g) **"Closing Date"** means the date of this Agreement or such other date as may be mutually agreed upon by the Vendor and the Purchaser;
- (h) **"Closing Financial Statements"** means collectively the Lucas Closing Balance Sheet, the Lucas PR Closing Balance Sheet, the Lucas Closing Income Statement and the Lucas PR Closing Income Statement;
- (i) **"Code"** means the U.S. Internal Revenue Code of 1986, and the regulations thereunder, as amended from time to time, or any successor law;
- (j) **"Contract"** means any written agreement, indenture, contract, lease, deed of trust, license, option, instrument or commitment;
- (k) **"Customer"** has the meaning set out in Section 3.40;

- (l) **"Deductible Amount"** means \$50,000.
- (m) **"Direct Claim"** has the meaning set out in Section 10.3;
- (n) **"EBITDA"** means earnings before interest, income taxes, depreciation and amortization, determined in accordance with GAAP;
- (o) **"Effective Date"** means 12:01 a.m. Eastern Standard Time on June 1, 2003;
- (p) **"Employee Plans"** has the meaning set out in Section 3.36;
- (q) **"Employees"** has the meaning set out in Section 3.38;
- (r) **"Employment Legislation"** means, collectively, the Fair Labor Standards Act of 1938, as amended, 29 U.S.C. § 201 et seq.: the Occupational Safety and Health Act of 1970, as amended, 29 U.S.C. § 651 et seq.: the National Labor-Management Relations Act, 29 U.S.C. § 141 et seq.: Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000 et seq.: the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § 621 et seq.: the Employee Retirement Income Security Act of 1974, as amended, 29 U.S.C. § 1000 et seq.: the Americans with Disabilities Act of 1990 as amended, 42 U.S.C. § 12101 et seq.: the Family and Medical Leave Act of 1993, 29 U.S.C. § 2601 et seq.: the Worker Adjustment Retraining and Notification Act, 29 U.S.C. § 2101 et seq. and all other applicable federal, state, territorial, and local laws governing the employment relationship in any jurisdiction in which the Business is conducted;
- (s) **"Encumbrance"** means any encumbrance, lien, charge, pledge, mortgage, title retention agreement, security interest of any nature, adverse claim, exception, reservation, easement, restriction, right of occupation, any matter capable of registration against title, option, right of pre-emption, privilege or any Contract to create any of the foregoing;
- (t) **"Environmental Law"** means any statute, code, by-law, regulation, published policy, permit, consent, approval, license, judgment, order, writ, decision, directive, common-law rule (including, without limitation, the common law respecting nuisance and tortious liability), decree, agency interpretation, injunction, agreement or authorization or requirement, whether federal, state, provincial, territorial, municipal or local, relating to;
 - (i) filings, registrations, emissions, discharges, spills, releases or threatened releases of Hazardous Substances or materials containing Hazardous Substances into the air, surface or ground water, water courses, water or sewage treatment works, drains, sewer systems, wetlands, septic systems or onto land;

- (ii) the import, export, use, distribution, treatment, storage, disposal, discharge, packaging, handling, processing, manufacturing, transportation, shipment, clean-up or other remediation of Hazardous Substances, materials containing Hazardous Substances or the equipment or apparatus containing Hazardous Substances; and
- (iii) pollution or the protection of human health or the environment, including workplace health or safety;
- (u) **"ERISA"** means the Employee Retirement Income Security Act of 1974, and the regulations thereunder, as amended;
- (v) **"Excluded Litigation"** has the meaning set out in Section 10.11;
- (w) **"Financial Statement Date"** means December 31, 2002;
- (x) **"GAAP"** has the meaning set out in Section 1.5.
- (y) **"Hazardous Substance"** means any substance, in solid, liquid or gaseous form, which is
 - (i) any substance, waste, pollutant, contaminant or material, in solid, liquid or gaseous form, which is a substance regulated or defined or designated as hazardous, extremely or imminently hazardous, dangerous, or toxic pursuant to any law, by any local, state, territorial, municipal or federal governmental authority;
 - (ii) any substance, waste, pollutant, contaminant or material, in solid, liquid or gaseous form, which is a substance with respect to which such a governmental authority otherwise requires environmental investigation, monitoring, reporting, or remediation; including but not limited to, (A) all substances, wastes, pollutants, contaminants and materials regulated, or defined or designated as hazardous, extremely or imminently hazardous, dangerous or toxic, under the following federal statutes and their state counterparts, as well as these statutes' implementing regulations; the Hazardous Materials Transportation Act, 42 U.S.C. section 1801 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. section 6901 et seq. ("RCRA"), the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. section 9601 et seq. ("CERCLA"), the Clean Water Act, 33 U.S.C. section 1251 et seq., the Safe Drinking Water Act, 42, U.S.C. section 300f et seq., the Atomic Energy Act, 42 U.S.C. section 2011 et seq., the Toxic Substances Control Act, 15 U.S.C. section 2601 et seq., the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. section 136 et seq., the Clean Air Act, 42 U.S.C. section 7401 et seq. and the Emergency Planning and Community Right to Know Act, 42 U.S.C. section 11001 et seq.; (B) petroleum and petroleum products including crude oil and any fractions thereof; (C) natural gas, synthetic gas, and any mixtures thereof; (D) radon; (E)

radioactive substances; (F) asbestos; (G) ureaformaldehyde; and (H) polychlorinated biphenyls;

- (iii) a substance considered, defined, designated or classified by or under an Environmental Law to be dangerous goods, a contaminant, a hazardous product or material, a toxic or designated substance which may adversely affect human health or the environment or a waste; or
- (iv) a substance capable of posing a risk of injury or damage to health, safety, property or the environment, including but not limited to, all substances, wastes, pollutants, contaminants, chemicals or materials regulated by or defined, designated or classified under any applicable Environmental Law.
- (z) **"Indebtedness"** means all obligations for borrowed money represented by bonds, debentures, notes or other similar evidence of indebtedness and obligations for borrowed money evidenced by credit, loan or other like agreements, with the amount of Indebtedness at any date to be the amount outstanding on account of principal and interest on such date;
- (aa) **"Indemnification Agreement"** has the meaning set out in Section 8.6;
- (bb) **"Indemnified Party"** has the meaning set out in Section 10.3;
- (cc) **"Indemnifying Party"** has the meaning set out in Section 10.3;
- (dd) **"Intellectual Property"** means all registered or pending or common law or civil law intellectual property issued to or owned or held by Lucas or Lucas PR, or in which Lucas or Lucas PR has an interest, or used by Lucas or Lucas PR in carrying on the Business, together with all rights under licences, registered user agreements, technology transfer agreements and other agreements or instruments relating to any of the foregoing;
- (ee) **"Interim Period"** means the period between the Effective Date and the Time of Closing;
- (ff) **"Kollman Parties"** means collectively the Vendor, the Shareholder, Nicholas J. Kollman, and Kevin J. Kollman;
- (gg) **"Leased Property"** has the meaning set out in Section 3.15;
- (hh) **"Leases"** has the meaning set out in Section 3.15;
- (ii) **"Licences"** has the meaning set out in Section 3.23;

- (jj) **"Losses"**, in respect of any matter, means all claims, demands, proceedings, losses, damages, liabilities, deficiencies, costs and expenses (including, without limitation, all reasonable and necessary legal and other professional fees and disbursements, interest, penalties and amounts paid in settlement) arising as a consequence of such matter;
- (kk) **"Lucas Closing Balance Sheet"** has the meaning set out in Section 2.3;
- (ll) **"Lucas Closing Income Statement"** has the meaning set out in Section 2.3;
- (mm) **"Lucas Financial Statements"** means the reviewed, unconsolidated financial statements of Lucas as at and for the financial years ended December 31, 2001 and 2002, including the notes thereto, a copy of which is annexed hereto as Schedule 1.1(mm);
- (nn) **"Lucas Membership Rights"** means 100% of the membership rights of Lucas;
- (oo) **"Lucas PR Closing Balance Sheet"** has the meaning set out in Section 2.3;
- (pp) **"Lucas PR Closing Income Statement"** has the meaning set out in Section 2.3;
- (qq) **"Lucas PR Financial Statements"** means the audited, unconsolidated financial statements of Lucas PR as at and for the financial years ended November 30, 2001 and 2002, including the notes thereto, a copy of which is annexed hereto as Schedule 1.1(qq);
- (rr) **"Lucas PR Shares"** means all of the issued and outstanding shares in the capital stock of Lucas PR;
- (ss) **"Net Working Capital"** has the meaning set out in Section 2.5(a);
- (tt) **"Oral Contract"** has the meaning set out in Section 3.21;
- (uu) **"Permitted Encumbrances"** means:
 - (i) liens for taxes, assessments or governmental charges or levies not yet due or liens for taxes, assessments or governmental charges or levies which are due but the validity of which is being contested in good faith by Lucas or Lucas PR, provided that Lucas or Lucas PR have provided security in the form of a security interest in assets which in the opinion of the Purchaser, acting reasonably, is sufficient to prevent any lien, charge or encumbrance being enforced against Lucas or Lucas PR;
 - (ii) undetermined or inchoate liens, charges and privileges incidental to current construction or current operations and statutory liens, charges, adverse claims, security interests or encumbrances of any nature whatsoever claimed or held by any governmental authority which have not at the time been filed or registered against the title to the asset or served

upon Lucas or Lucas PR pursuant to law or which relate to obligations not due or delinquent;

- (iii) assignments of insurance provided to landlords (or their mortgagees) pursuant to the terms of any lease, and liens or rights reserved in any lease for rent or for compliance with the terms of such lease;
- (iv) security given in the Ordinary Course of Business (as hereafter defined) to any public utility, municipality or government or to any statutory or public authority in connection with the operations of the Business, other than security for borrowed money;
- (v) unregistered purchase money security interests arising under contracts for the supply of goods and materials entered into in the Ordinary Course of Business which secure the unpaid balance of the purchase price for goods and/or materials purchased thereunder which are due and payable (and have been outstanding) for not more than 30 days after delivery of the invoice therefor; and
- (vi) the Encumbrances described in Schedule 1.1(uu);
- (vv) **"Purchase Price"** has the meaning set out in Section 2.2;
- (ww) **"Purchased Membership Rights"** has the meaning set out in Section 2.1;
- (xx) **"Purchased Shares"** has the meaning set out in Section 2.1;
- (yy) **"Promissory Note"** has the meaning set out in Section 2.2(b);
- (zz) **"Shareholder"** mean the Trust ;
- (aaa) **"Third Party Claim"** has the meaning set out in Section 10.3;
- (bbb) **"Time of Closing"** means 10:00 a.m. Eastern Standard Time on the Closing Date or such other time on the Closing Date as the Vendor and the Purchaser may mutually determine;
- (ccc) **"Tollgate Taxes"** has the meaning set out in Section 3.29; and
- (ddd) **"Vendor's Counsel"** means Gebhardt & Smith LLP, whose address is 401 East Pratt Street, 9th Floor, Baltimore, Maryland 21202.

1.2 Currency. Unless otherwise indicated, all dollar amounts referred to in this Agreement are expressed in United States dollars.

- 1.3 **Sections and Headings.** The division of this Agreement into Articles and Sections and the insertion of headings and a table of contents are for convenience of reference only and shall not affect the interpretation of this Agreement. Unless otherwise indicated, any reference in this Agreement to an Article, Section or a Schedule refers to the specified Article or Section of, or Schedule to this Agreement.
- 1.4 **Number, Gender and Persons.** In this Agreement, words importing the singular number only shall include the plural and *vice versa*, words importing gender shall include all genders and words importing persons shall include individuals, corporations, partnerships, associations, trusts, unincorporated organizations, governmental bodies and other legal or business entities of any kind whatsoever.
- 1.5 **Accounting Principles.** Any reference in this Agreement to generally accepted accounting principles or "GAAP" refers to generally accepted accounting principles which have been established in the United States, consistently applied.
- 1.6 **Vendor's, Shareholder's, Lucas' and Lucas PR's Knowledge.** For the purposes of any reference in this Agreement to "knowledge of the Vendor", "knowledge of the Vendor, Lucas and Lucas PR", or "knowledge of the Vendor, the Shareholder, Lucas and Lucas PR", shall mean the actual knowledge of Nicholas J. Kollman, Kevin J. Kollman, Peggy Slendorn-Koppe and Luis Rosado Garcia.
- 1.7 **Ordinary Course of Business.** Any reference in this Agreement to the "Ordinary Course of Business" shall mean the ordinary and normal course of the Business, consistent with the practice of Lucas since January 1, 2002 and of Lucas PR since December 1, 2001.
- 1.8 **Entire Agreement.** This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, understandings, negotiations and discussions, whether written or oral. There are no conditions, covenants, agreements, representations, warranties or other provisions, express or implied, collateral, statutory or otherwise, relating to the subject matter hereof except as herein provided.
- 1.9 **Time of Essence.** Time shall be of the essence of this Agreement.
- 1.10 **Applicable Law.** This Agreement shall be construed, interpreted and enforced in accordance with, and the respective rights and obligations of the parties shall be governed by, the laws of the State of Maryland and the federal laws of the United States of America applicable therein, and each of the parties hereto hereby irrevocably consents and attorns to the exclusive venue and jurisdiction of the courts of the State of Maryland for any action arising out of this Agreement. **EACH OF THE PARTIES HEREBY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION (i) ARISING UNDER THIS AGREEMENT OR (ii) IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO IN RESPECT OF THIS AGREEMENT OR THE TRANSACTIONS RELATED HERETO IN EACH CASE**

WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER IN CONTRACT, TORT, EQUITY OR OTHERWISE. EACH OF THE PARTIES HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY AND THAT EACH PARTY MAY FILE AN ORIGINAL COUNTERPART OF THIS AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE PARTIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

1.11 Best Efforts. The parties acknowledge and agree that, for all purposes of this Agreement, an obligation on the part of any party to use its best efforts to obtain any waiver, consent, approval, permit, license or other document shall not require such party to make any payment to any person for the purpose of procuring the same, other than payments for amounts due and payable to such person under the terms of any relevant agreement as it stood prior to the date of this Agreement, payments for incidental expenses incurred by such person and payments required by any applicable law or regulation, nor permit the Vendor (without the consent of the Purchaser) to change any contractual rights or obligations relating to Lucas, Lucas PR or the Purchaser.

1.12 Schedules. The following Schedules are attached to and form part of this Agreement:

Schedule 1.1(mm)	-	Lucas Financial Statements
Schedule 1.1(qq)	-	Lucas PR Financial Statements
Schedule 1.1(uu)	-	Permitted Encumbrances
Schedule 2.2	-	Purchase Price Allocation
Schedule 2.2(b)	-	Promissory Note
Schedule 2.6	-	Escrow Agreement
Schedule 3.13	-	Location of Assets
Schedule 3.14	-	Title to Personal Property
Schedule 3.15	-	Leased Real Property
Schedule 3.16	-	Inventories
Schedule 3.18	-	Intellectual Property
Schedule 3.19	-	Insurance Policies

Schedule 3.21	-	Material Contracts
Schedule 3.23	-	Licenses and Permits
Schedule 3.24A	-	Regulatory Consents and Approvals
Schedule 3.24B	-	Contractual Consents and Approvals
Schedule 3.25	-	Exceptions to GAAP
Schedule 3.25A	-	May 31, 2003 Financial Statements
Schedule 3.28 -	-	Absence of Changes
Schedule 3.29	-	Taxes
Schedule 3.30	-	Legal and Regulatory Proceedings
Schedule 3.31	-	Accounts and Attorneys
Schedule 3.32	-	Directors and Officers
Schedule 3.33	-	Dividends
Schedule 3.34	-	Transactions with Affiliates
Schedule 3.36	-	Employee Plans
Schedule 3.37A	-	Collective Agreements
Schedule 3.37B	-	Work Stoppages
Schedule 3.38A	-	Employees
Schedule 3.38B	-	Absent Employees
Schedule 3.38C	-	Charges Under Employment Legislation
Schedule 3.38G	-	Employee Claims
Schedule 3.40A	-	Customers
Schedule 3.40B	-	Rebates, Discounts and Allowances
Schedule 3.41	-	Product Warranties

Schedule 5.4	-	Purchaser's Consents and Approvals
Schedule 7.1(j)	-	Form of Non-Competition Agreement
Schedule 7.1(k)	-	Employment/Consulting Agreement
Schedule 7.1(l)	-	Form of Opinion of Vendor's Counsel
Schedule 7.1(o)	-	Form of Release
Schedule 8.6	-	Form of Indemnification Agreement
Schedule 10.11	-	Excluded Litigation

2. PURCHASE AND SALE OF PURCHASED SHARES

2.1 Purchase and Sale of Purchased Shares and the Purchased Membership Rights.

Subject to the terms and conditions hereof, the Vendor covenants and agrees to sell, assign and transfer to the Purchaser and the Purchaser covenants and agrees to purchase from the Vendor, on the Closing Date, all but not less than all of the Lucas PR Shares (the "Purchased Shares") and all but not less than 100% of the Lucas Membership Rights (the "Purchased Membership Rights"). Title to the Purchased Shares and the Purchased Membership Rights shall be transferred on the Closing Date upon the payment of the Purchase Price in accordance with the Section 2.2, with all economic and accounting aspects of the transaction to have effect as of the Effective Date.

2.2 Purchase Price.

The purchase price payable by the Purchaser to the Vendor for the Purchased Shares and the Purchased Membership Rights shall be \$10,125,000, subject to adjustments in accordance with Section 2.5 hereof (the "Purchase Price"). The Purchase Price shall be allocated to the Purchased Shares and the Purchased Membership Rights as set out on Schedule 2.2. At the Time of Closing, the Purchase Price shall be paid and satisfied, subject to adjustments in accordance with Section 2.5, as follows:

- (a) on the Closing Date the Purchaser shall pay to the Vendor by wire transfer to an account specified in writing by the Vendor two (2) Business Days prior to the Closing Date the amount of \$9,875,000;
- (b) as to the balance of the Purchase Price equaling \$250,000, by delivery of a promissory note by the Purchaser to the Vendor in the form attached hereto as Schedule 2.2(b) (the "Promissory Note").

2.3 Closing Financial Statements.

As soon as is practicable, and in any event not later than 45 days following the Closing Date, the Purchaser shall deliver to the Vendor an unaudited, unconsolidated balance sheet for Lucas as of the opening of business on the Effective Date (the "Lucas Closing Balance Sheet"), an unaudited, unconsolidated income statement for Lucas for the period from January 1, 2003 to the Effective Date (the "Lucas Closing Income Statement"), an unaudited, unconsolidated balance sheet for Lucas PR as of the opening of business on the Effective Date (the "Lucas PR Closing

Balance Sheet") and an unaudited, unconsolidated income statement for Lucas PR for the period from December 1, 2002 to the Effective Date (the "Lucas PR Closing Income Statement"). The Lucas Closing Balance Sheet and the Lucas PR Closing Balance Sheet shall be prepared in accordance with GAAP applied on a basis consistent with the Lucas Financial Statements and the Lucas PR Financial Statements, respectively, and shall present fairly the unconsolidated financial position of Lucas and Lucas PR, respectively, as at the Effective Date. The Lucas Closing Income Statement and the Lucas PR Closing Income Statement shall be prepared in accordance with GAAP applied on a basis consistent with the Lucas Financial Statements and the Lucas PR Financial Statements, respectively, and shall present fairly the unconsolidated sales, earnings and results of operations for the period between January 1, 2003 and the Effective Date in the case of Lucas and for the period between December 1, 2002 and the Effective Date in the case of Lucas PR.

- 2.4 Disputes Concerning Closing Financial Statements.** The Vendor shall have a period of 20 Business Days from the date it receives the Closing Financial Statements in which to review the same. For the purpose of such review, the Purchaser agrees to cause its accountants and representatives to permit the Vendor and its authorized representatives to examine all schedules and other documentation used or prepared by the Purchaser's accountants and representatives including, to the extent the accountants and representatives so permit, their working papers. If no objection to the Closing Financial Statements is given to the Purchaser by the Vendor within such 20 Business Day period, the Closing Financial Statements shall be deemed to have been approved as of the last day of such 20 Business Day period. If the Vendor objects to any of the Closing Financial Statements within such 20 Business Day period by giving notice to the Purchaser setting out in reasonable detail the nature of such objection, the parties agree to attempt to resolve the matters in dispute within 15 Business Days from the date the Vendor gives such notice to the Purchaser. If all matters in dispute are resolved by the parties, the Closing Financial Statements shall be modified to the extent required to give effect to such resolution and shall be deemed to have been approved as of the date of such resolution. If the parties cannot resolve all matters in dispute within such 15 Business Day period, all unresolved matters shall be submitted to PriceWaterhouseCoopers for resolution, and PriceWaterhouseCoopers shall be given access to all materials and information reasonably requested by it for such purpose. The rules and procedures to be followed by PriceWaterhouseCoopers in resolving the matters in dispute shall be determined by PriceWaterhouseCoopers in its discretion, provided however for greater certainty that PriceWaterhouseCoopers shall not be permitted to redefine EBITDA. PriceWaterhouseCoopers' determination of all such matters shall be final and binding on both parties and shall not be subject to appeal by either party. The fees and expenses of PriceWaterhouseCoopers shall be borne equally by the parties. The Closing Financial Statements shall be modified to the extent required to give effect to PriceWaterhouseCoopers' determination and shall be deemed to have been approved as of the date of such determination.

2.5 Purchase Price Adjustment.

- (a) For the purpose of this Agreement, "Net Working Capital" means current assets (exclusive of cash) less current liabilities (other than the current portion of bank indebtedness and notes payable). If the sum of the Net Working Capital figure shown on the Lucas Closing Balance Sheet and the Net Working Capital figure shown on the Lucas PR Closing Balance Sheet (the "Total Net Working Capital") is less than \$800,000, the Purchase Price payable for the Purchased Shares and the Purchased Membership Rights shall be decreased by an amount equal to the difference between \$800,000 and the Total Net Working Capital. If the Total Net Working Capital is greater than \$800,000, the Purchase Price payable for the Purchased Shares and the Purchased Membership Rights shall be increased by an amount equal to the difference between \$800,000 and the Total Net Working Capital.
- (b) On the Closing Date, the Vendor shall provide to Purchaser a certificate of the President of the Vendor certifying the total Indebtedness (exclusive of Indebtedness in the amount of \$95,000 for the purchase of equipment from Vijuk Equipment, Inc.) and the total cash balances (comprised of cash balances plus checks that have been deposited with the bank which have not cleared and for which value has not been given less checks written which have not cleared) of Lucas and Lucas PR as of the Effective Date ("Closing Cash Balance") (the "Closing Certifications"). The Closing Certifications shall have attached as supporting schedules bank statements as of May 31, 2003 identifying such cash balances and Indebtedness amounts and a reconciliation of such bank statement balances to the balances on the Closing Certifications. If the sum of the total Indebtedness of Lucas and Lucas PR shown on the Closing Certifications (the "Closing Indebtedness") is greater than \$2,750,000, the Purchase Price payable both for the Purchased Shares and the Purchased Membership Rights shall be decreased by an amount equal to the difference between \$2,750,000 and the Closing Indebtedness. If the Closing Indebtedness is less than \$2,750,000, the Purchase Price shall be increased by an amount equal to the difference between \$2,750,000 and the Closing Indebtedness. In the event the sum of the Closing Cash Balances on the Closing Certifications is greater than \$260,000, then the Purchase Price payable shall be increased by the amount by which the Closing Cash Balance exceeds \$260,000. In the event the Closing Cash Balance is less than \$260,000, then the Purchase Price payable shall be decreased by the amount by which the Closing Cash Balance is less than \$260,000.
- (c) Upon completion of the Closing Financial Statements, Purchaser shall notify Vendor of any discrepancies in the amount of the Closing Cash Balance or Closing Indebtedness as reflected on the Closing Certifications and the Closing Financial Statements. In the event that any such discrepancies exist, the parties agree to resolve such differences in accordance with the procedures set forth in Section 2.4, with the Purchase Price to be adjusted accordingly.

- (d) In the event that after adjusting the Purchase Price pursuant to Sections 2.5(a), 2.5(b) and 2.5(c) hereof there is a reduction in the Purchase Price, such amount shall be deducted from the Promissory Note. If the reduction in the Purchase Price is greater than the Promissory Note, such difference shall forthwith be paid by the Vendor to the Purchaser by certified check or banker's draft to or to the order of the Purchaser. In the event that after adjusting the Purchase Price pursuant to Sections 2.5(a), and 2.5(b) hereof there is an increase in the Purchase Price, such increase shall be added to the Purchase Price at the Time of Closing. In the event that after adjusting the Purchase Price pursuant to Section 2.5(c) hereof there is an increase in the Purchase Price, such increase shall be forthwith be paid by the Purchaser to the Vendor by certified check or banker's draft to or to the order of the Vendor.

2.6 Payout of Promissory Note. The outstanding principal amount of the Promissory Note may be adjusted from time to time in accordance with Section 2.5.

- (a) If the Purchaser has not made any Claim against the Vendor under this Agreement within 180 days from the Closing Date ("Claim Period"), the Purchaser shall pay the Promissory Note, as adjusted pursuant to Section 2.5, to the Vendor on the first Business Day following the expiration of the Claim Period.
- (b) If the Purchaser has made a Claim or Claims against the Vendor under this Agreement within the Claim Period and the Vendor and the Purchaser have agreed in writing to the settlement of such Claims, the Purchaser shall pay the outstanding principal of the Promissory Note, as adjusted pursuant to Section 2.5, less the amount of such settled Claims, to the Vendor on the first Business Day following the expiration of the Claim Period. Any written settlement of a Claim or Claims between the Vendor and the Purchaser during the Claim Period shall have the effect of reducing the amount of outstanding principal on the Promissory Note by the amount of such settlement.
- (c) If the Purchaser and the Vendor have not agreed to the settlement of all Claims, then on the first business day after the expiration of the Claim Period:
 - (i) the Purchaser shall pay the amount of the Promissory Note then outstanding which in the opinion of the Purchaser is needed to satisfy such outstanding Claims by wire transfer to an escrow agent mutually acceptable to the parties (the "Escrow Agent"), in trust, which amount shall be held in escrow by the Escrow Agent pursuant to the terms of the Escrow Agreement to be entered into by the Vendor, the Purchaser and the Escrow Agent, on substantially the same terms as the draft attached hereto as Schedule 2.6 (the "Escrow Agreement"); and

- (ii) the Purchaser shall pay to the Vendor an amount equal to the amount of the Promissory Note then outstanding less the amount paid to the Escrow Agent pursuant to Section 2.6(c)(i).

Upon completion of the payments in Sections 2.6(a), (b) and (c) above, the Promissory Note shall be and shall be deemed to have been paid in full and the Vendor shall return to the Purchaser the original copy of the Promissory Note.

- 2.7 **Tollgate Taxes.** To the extent that the amount of Tollgate Taxes (and any associated interest and penalties that have accrued thereon) owed by Lucas PR exceeds the sum of \$100,000, such excess amount upon the demand of the Purchaser shall be promptly paid by the Vendor to the Purchaser in immediately available funds.

3. **REPRESENTATIONS AND WARRANTIES OF THE VENDOR AND THE SHAREHOLDER**

The Vendor and the Shareholder jointly and severally represent and warrant to the Purchaser as follows and acknowledge that the Purchaser is relying on such representations and warranties in connection with its purchase of the Purchased Shares and the Purchased Membership Rights:

- 3.1 **Organization and Status - Lucas.** Lucas is validly existing in good standing under the laws of the State of Maryland. Lucas is duly registered, licensed or qualified to carry on business under the laws of the State of Maryland being the only jurisdiction in which the nature of the Business makes such registration, licensing or qualification necessary.
- 3.2 **Organization and Status - Lucas PR.** Lucas PR is validly existing in good standing under the laws of Delaware. Lucas PR is duly registered, licensed or qualified to carry on business under the laws of Puerto Rico and Maryland, being the only jurisdictions in which it carries on business.
- 3.3 **Company Power and Authorization - Lucas.** Lucas has the necessary power and capacity to enter into this Agreement and to perform its obligations hereunder, to own and lease its property and assets and to carry on the Business as now being conducted by it. This Agreement has been duly authorized by Lucas. Each of the agreements, contracts and instruments required by this Agreement to be delivered by Lucas at the Time of Closing has been duly authorized by Lucas. This Agreement has been duly executed and delivered by Lucas and is a legal, valid and binding obligation of Lucas, enforceable against Lucas by the Purchaser in accordance with its terms. At the Time of Closing, each of the agreements, contracts and instruments required by this Agreement to be delivered by Lucas will be duly executed and delivered by Lucas and will be valid and binding obligations of Lucas, enforceable in accordance with their respective terms.
- 3.4 **Corporate Power and Authorization - Lucas PR.** Lucas PR has the corporate power and capacity to enter into this Agreement and to perform its obligations hereunder, to own and lease its property and assets and to carry on the Business as now being conducted by it. This Agreement has been duly authorized by Lucas PR. Each of the agreements, contracts and instruments required by this Agreement to be delivered by

Lucas PR at the Time of Closing has been duly authorized by Lucas PR. This Agreement has been duly executed and delivered by Lucas PR and is a legal, valid and binding obligation of Lucas PR, enforceable against Lucas PR by the Purchaser in accordance with its terms. At the Time of Closing, each of the agreements, contracts and instruments required by this Agreement to be delivered by Lucas PR will be duly executed and delivered by Lucas PR and will be valid and binding obligations of Lucas PR, enforceable in accordance with their respective terms.

- 3.5 **Membership Rights - Lucas.** The authorized capital of Lucas consists of membership rights, of which 100% (and not less than 100%) are owned by the Vendor as the beneficial owner of record thereof, with good and valid title thereto, free and clear of all Encumbrances.
- 3.6 **Authorized and Issued Capital – Lucas PR.** The authorized capital stock of Lucas PR consists of 3,000 shares, of which 463 shares (and no more) have been duly issued and are outstanding as fully paid and non-assessable. All of such issued and outstanding shares of Lucas PR are owned by the Vendor as the beneficial owner of record thereof, with good and valid title thereto, free and clear of all Encumbrances.
- 3.7 **No Other Agreements to Purchase - Lucas.** No person other than the Purchaser has any written or oral agreement or option or any right or privilege (whether by law, pre-emptive or contractual) capable of becoming an agreement or option for the purchase or acquisition from the Vendor of any of the Purchased Membership Rights.
- 3.8 **No Other Agreements to Purchase – Lucas PR.** No person other than the Purchaser has any written or oral agreement or option or any right or privilege (whether by law, pre-emptive or contractual) capable of becoming an agreement or option for the purchase or acquisition from the Vendor of any of the Purchased Shares.
- 3.9 **No Options.** No person has any agreement or option or any right or privilege (whether by law, pre-emptive or contractual) capable of becoming an agreement, including convertible securities, warrants or convertible obligations of any nature, for the purchase, subscription, allotment or issuance of any unissued shares, membership interests or other securities of Lucas or Lucas PR.
- 3.10 **Ownership of Purchased Shares and the Purchased Membership Rights.** The Vendor is the legal and beneficial owner of record of the Purchased Shares and the Purchased Membership Rights, with good and valid title thereto, free and clear of all Encumbrances and, without limiting the generality of the foregoing, none of the Purchased Shares or the Purchased Membership Rights is subject to any voting trust, shareholder agreement or voting agreement. Upon completion of the transaction contemplated by this Agreement, all of the Purchased Shares and the Purchased Membership Rights will be owned by the Purchaser as the beneficial owner of record, with a good and valid title thereto (except for such Encumbrances as may have been granted by the Purchaser).

3.11 No Subsidiaries. Neither Lucas nor Lucas PR owns or has any agreements of any nature to acquire, directly or indirectly, any shares in the capital of or other equity or proprietary interests in any person and neither Lucas nor Lucas PR has any agreements to acquire or lease any other business operations.

3.12 No Violation. Except as set forth in Schedules 3.24A and 3.24B and except for any consents not obtained with respect to the Allfirst Indebtedness neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby:

- (a) will violate or conflict with any applicable law, statute, ordinance, regulation or rule, or any judgment, decree, order or award of any court, governmental body or arbitrator having jurisdiction over the Vendor, Lucas or Lucas PR;
- (b) will require any authorization, consent, approval, exemption or other action by, or notice to, any governmental agency, authority, regulatory body or court;
- (c) subject to obtaining the consents referred to in Schedules 3.24A and 3.24B, will violate or conflict with, or constitute a default (or will constitute an event which, with notice or lapse of time, or both, would constitute a default) under any Contract to which the Vendor, Lucas or Lucas PR is a party or by which any of them or any of their assets or properties may be bound or affected;
- (d) will result in the termination of, any additional payment under, or the change in any terms of, or accelerate the performance of any obligation required by (or give rise to a right of any party thereto, exercisable on notice or otherwise, to terminate, to require that any additional payment be made under, to change any terms of, or to accelerate the performance of any obligation under) any Contract to which the Vendor, Lucas or Lucas PR is a party or by which any of them or any of their assets or properties may be bound or affected;
- (e) will result in the creation of any Encumbrance upon any of the property or assets of the Vendor, Lucas or Lucas PR; or
- (f) will violate or conflict with any Licence held by Lucas or Lucas PR or which is necessary to the ownership of the Purchased Shares or the Purchased Membership Interest or the operation of the Business.

3.13 Business of Lucas and Lucas PR. The Business is the only business operation carried on by Lucas and Lucas PR, and the property and assets owned and leased by Lucas and Lucas PR are sufficient to carry on the Business consistent with past practice. The Vendor and the Shareholder make no representation and warranty regarding the condition of the equipment used in the operation of the Business. During the two years preceding the date of this Agreement, there has not been any cessation of operations of more than one day of the Business by either Lucas or Lucas PR due to inadequate maintenance of any of the property and assets owned and used by Lucas or Lucas PR. With the exception of inventory in transit, all the tangible assets of Lucas and Lucas PR are situate at the locations set out in Schedule 3.13.

- 3.14 Title to Personal Property.** The property and assets of Lucas and Lucas PR are owned by Lucas or Lucas PR, as the case may be, as the absolute and beneficial owner thereof with a good and valid title thereto, free and clear of all Encumbrances other than Permitted Encumbrances. Lucas or Lucas PR have, and at the Time of Closing will have, the exclusive right to possess, use, occupy and dispose of all of its property and assets, subject only to the rights of the other parties to the Contracts listed in any Schedule to this Agreement. Schedule 3.14 lists all of the equipment of the Lucas and Lucas PR having a net book value of greater than \$10,000 used to carry on the Business. The property and assets of Lucas and Lucas PR comprise all of the assets used to carry on the Business.
- 3.15 Location of Real Property.** Schedule 3.15 sets forth the municipal address and location of all the real property which is leased by Lucas and Lucas PR (the "Leased Property"). Neither Lucas nor Lucas PR own or lease and neither has agreed to acquire or lease any real property or interest in real property other than the Leased Property. To the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR, all buildings, structures, improvements and appurtenances (including without limitation, the HVAC systems) situated on the Leased Property are in good operating condition and in a state of good maintenance and repair, having regard to their age, are adequate and suitable for the purposes for which they are currently being used and Lucas and Lucas PR have adequate rights of ingress and egress for the operation of the Business in the Ordinary Course. To the knowledge of the Vendor, there is nothing owing in respect of the Leased Property by Lucas or Lucas PR to any municipal corporation or to any other corporation or commission owning or operating a public utility for gas, water, electrical power or energy, steam or hot water, or for the use thereof, other than current accounts in respect of which the payment due date has not yet passed. To the knowledge of the Vendor, the Shareholders, Lucas and Lucas PR, the Leased Property (including all buildings, improvements and fixtures, and without limitation, the HVAC systems) is fit for its present use, and there are no repairs, replacements or maintenance which, in the aggregate, exceed \$50,000, which are necessary or advisable and, without limiting the generality of the foregoing, there are no repairs to, or replacements of, the roof or the mechanical, electrical, heating, ventilating, air-conditioning, plumbing or drainage equipment or systems which are necessary or advisable, and the Leased Property is not currently undergoing any alteration or renovation nor is any such alteration or renovation contemplated. Neither Lucas nor Lucas PR is a party to any lease or agreement in the nature of a lease in respect of any real property, whether as lessor or lessee, other than the leases (the "Leases") described in Schedule 3.15 relating to the Leased Property. Schedule 3.15 sets out the parties to each of the Leases, their dates of execution and expiry dates, and options to renew, the location of the leased lands and premises and the rent payable thereunder. Except as described in Schedule 3.15, Lucas or Lucas PR occupy the Leased Property and has the exclusive right to occupy and use the Leased Property. Each of the Leases is in good standing and in full force and effect without amendment thereto other than as described in Schedule 3.15, and neither Lucas, Lucas PR nor any other party thereto is in breach of any covenants, conditions or obligations contained therein. The Vendor has provided a true copy of each Lease to the Purchaser.

- 3.16 Inventories.** Except as described in Schedule 3.16, the inventories of Lucas and Lucas PR do not include any items exceeding \$10,000 in book value in the aggregate which are over one year old, below standard quality or of a quality or quantity not useable or saleable in the Ordinary Course of Business, the value of which has not been written down on its books of account to net realizable market value. The inventory levels of Lucas and Lucas PR have been maintained at such amounts as are required for the operation of the Business as previously conducted, and such inventory levels are adequate therefor.
- 3.17 Accounts Receivable.** All accounts receivable, book debts and other debts due or accruing to Lucas and Lucas PR: (a) arise from *bona fide* transactions between either Lucas or Lucas PR and their respective Customers; (b) are not subject to any counterclaims or setoffs; (c) have not been compromised; and (d) are due and payable in accordance with their stated terms.
- 3.18 Intellectual Property.** Schedule 3.18 sets out all of the Intellectual Property (including particulars and status of registration or application for registration) and all licences, registered user agreements and other Contracts which comprise or relate to Intellectual Property. There is no material Intellectual Property other than shrink wrap and off-the-shelf software licences. The Intellectual Property is sufficient to conduct the Business. Either Lucas or Lucas PR is the legal and beneficial owner of the Intellectual Property, free and clear of all Encumbrances (except for the Intellectual Property listed in Schedule 3.18 which is identified as being licensed to either Lucas or Lucas PR), and is not a party to or bound by any Contract or any other obligation whatsoever that limits or impairs its ability to sell, transfer, assign or convey, or that otherwise affects, the Intellectual Property. No person has been granted any interest in or right to use all or any portion of the Intellectual Property, except as set out in Schedule 3.18. The conduct of the Business does not infringe upon the industrial or intellectual property rights, domestic or foreign, of any other person. The Vendor has provided to the Purchaser a true and complete copy of all Contracts and amendments thereto which comprise or relate to the Intellectual Property.
- 3.19 Insurance.** Schedule 3.19 sets out all insurance policies (specifying the insurer, the amount of the coverage, the type of insurance, the policy number, the policy term, the deductible, the premium and any pending claims thereunder) currently maintained by both Lucas and/or Lucas PR on their property, assets, personnel and all other insurable liabilities and true and complete copies of the most recent inspection reports, if any, received from insurance underwriters or others as to the condition of the property and assets of Lucas and Lucas PR. Neither Lucas nor Lucas PR is in default with respect to any of the provisions contained in any such insurance policy and has not failed to give any notice or present any claim under any such insurance policy in a due and timely fashion. The Vendor has provided to the Purchaser a true copy of each insurance policy referred to in Schedule 3.19.

- 3.20 No Expropriation.** No property or asset of Lucas or Lucas PR has been taken or expropriated by any federal, provincial, state, territorial, municipal or other authority nor has any notice or proceeding in respect thereof been given or commenced nor is the Vendor, Lucas, Lucas PR or the Shareholder aware of any intent or proposal to give any such notice or commence any such proceeding.
- 3.21 Agreements and Commitments.** Other than related party transactions as disclosed in the notes to the Lucas Financial Statements and the Lucas PR Financial Statements and except as disclosed on Schedules 3.15, 3.18, 3.19, 3.21, 3.23, 3.36, 3.40B, or 3.41, neither Lucas nor Lucas PR is a party to or bound by any Contract relating to the property, assets or operations of Lucas, Lucas PR or the Business. Schedules 3.15, 3.18, 3.19, 3.21, 3.23, 3.36, 3.40B, and 3.41 contain a true and complete list and description of all Contracts to which Lucas or Lucas PR is a party. Each of Lucas, Lucas PR and the Vendor has performed all of the obligations required to be performed by it and is entitled to all benefits under, and is not in default or alleged to be in default in respect of, any Contract relating to the Business to which it is a party or by which it is bound; all such Contracts are in good standing and in full force and effect, and no event, condition or occurrence exists which, after notice or lapse of time or both, would constitute a default under any of the foregoing. The Vendor has provided to the Purchaser a true and complete copy of each Contract listed or described on Schedule 3.21 and all Contracts relating to the related party transactions as disclosed in the notes to the Lucas Financial Statements and the Lucas PR Financial Statements. Neither Lucas nor Lucas PR is a party to any oral agreement, indenture, contract, lease, license, option, instrument or commitment ("Oral Contract") which is in excess of \$50,000 individually, and the Oral Contracts of Lucas and Lucas PR do not exceed \$100,000 in the aggregate.
- 3.22 Compliance With Laws.** Each of Lucas and Lucas PR conducts and has conducted the Business in compliance with all applicable laws, regulations, by-laws, ordinances, regulations, rules, judgments, decrees and orders of each jurisdiction in which the Business is or was carried on.
- 3.23 Licenses.** Schedule 3.23 sets out a complete and accurate list of all licenses, permits, approvals, consents, certificates, registrations and authorizations (whether governmental, regulatory or otherwise) (the "Licenses") held by or granted to Lucas or Lucas PR, and there are no other licenses, permits, approvals, consents, certificates, registrations or authorizations necessary to carry on the Business or to own or lease any of the property or assets utilized by Lucas or Lucas PR, other than those described in Section 6.3. Each License is valid, subsisting and in good standing and neither Lucas nor Lucas PR is in default or breach of any License. To the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR, there is not any matter, condition or set of facts which might reasonably indicate that a proceeding is pending or threatened to revoke or limit any License. The Vendor has provided a true and complete copy of each License and all amendments thereto to the Purchaser.

3.24 Consents and Approvals. Except for the consents and approvals set out in Schedules 3.24A and 3.24B, no authorization, consent or approval of, or filing with or notice to:

- (a) any governmental agency, regulatory body or court;
- (b) any law, statute, ordinance, regulation or rule; or
- (c) any party to a Contract to which Lucas, Lucas PR or the Vendor (in respect of Lucas, Lucas PR or the Business), is a party or by which it is bound,

is required in connection with the execution, delivery and performance of this Agreement by Lucas, Lucas PR and the Vendor or the sale of the Purchased Shares and Purchased Membership Interests hereunder. Notwithstanding the foregoing, the Vendor as of the date hereof has not filed with the Puerto Rico Office of Industrial Tax Exemption a notice and request for authorization for transfer of stock and change in control of exempted business, and any consents that may be required from the holder of the Allfirst Indebtedness have not been obtained.

3.25 Financial Statements. Except as set out in Schedule 3.25, the Lucas Financial Statements and the Lucas PR Financial Statements have been prepared in accordance with GAAP applied on a basis consistent with prior periods, and present fairly the assets, liabilities (whether accrued, absolute, or contingent) and financial condition of Lucas and Lucas PR as at the respective dates of the Lucas Financial Statements and the Lucas PR Financial Statements and the sales, earnings and results of operations of Lucas and Lucas PR for the respective periods covered by the Lucas Financial Statements and the Lucas PR Financial Statements. Schedule 3.25A contains the unaudited, unconsolidated financial statements of Lucas as at and for the 5 months ended May 31, 2003 (the "Lucas May 2003 Financial Statements") and the unaudited, unconsolidated financial statements of Lucas PR as at and for the 6 months ended May 31, 2003 (collectively, the "Lucas PR May 2003 Financial Statements") Except as set out in Schedule 3.25A, the Lucas May 2003 Financial Statements and the Lucas PR May 2003 Financial Statements have been prepared in accordance with GAAP applied on a basis consistent with prior periods, and present fairly the assets, liabilities (whether accrued, absolute, or contingent) and financial condition of Lucas and Lucas PR as at the respective dates of the Lucas May 2003 Financial Statements and the Lucas PR May 2003 Financial Statements and the sales, earnings and results of operations of Lucas and Lucas PR for the respective periods covered by the Lucas May 2003 Financial Statements and the Lucas PR May 2003 Financial Statements.

3.26 Financial Books and Records. The books and records of Lucas and Lucas PR have been maintained in accordance with good bookkeeping practice and fairly set out and disclose the financial position of Lucas and Lucas PR, respectively, as at the date hereof and all financial transactions of Lucas and Lucas PR, have been recorded in such books and records, consistent with past practices.

3.27 Corporate Records. The corporate records and minute books of Lucas and Lucas PR, complete copies of which have been previously provided to the Purchaser, contain complete and accurate minutes of all meetings of the directors, members and shareholders of Lucas and Lucas PR for which minutes were kept, respectively, held since the formation and incorporation of Lucas and Lucas PR respectively, all such meetings were duly called and held, the share certificate books, registers of shareholders, registers of transfers and registers of members, directors and officers of Lucas and Lucas PR, respectively, are complete and accurate and all exigible security transfer tax payable in connection with the transfer of any securities or interest of Lucas and Lucas PR has been duly paid. There are no resolutions of directors, members or shareholders except as contained in the minute books or as previously provided to Purchaser.

3.28 Absence of Changes. Except as set out in Schedule 3.28, since December 31, 2002 in the case of Lucas and since November 30, 2002 in the case of Lucas PR, Lucas and Lucas PR have carried on the Business and conducted their operations and affairs only in the Ordinary Course of Business and there has not been:

- (a) any material adverse change in the condition (financial or otherwise), assets, liabilities, operations, earnings, business or prospects of Lucas, Lucas PR or the Business;
- (b) any damage, destruction or loss (whether or not covered by insurance) affecting the property or assets of Lucas or Lucas PR;
- (c) any obligation or liability (whether absolute, accrued, contingent or otherwise, and whether due or to become due) incurred by Lucas or Lucas PR, other than those incurred in the Ordinary Course of Business, or disclosed in the Lucas Financial Statements or Lucas PR Financial Statements;
- (d) any payment, discharge or satisfaction of any Encumbrance, liability or obligation of Lucas or Lucas PR (whether absolute, accrued, contingent or otherwise, and whether due or to become due) other than payment of accounts payable, repayment of indebtedness in accordance with its terms and tax liabilities incurred in the Ordinary Course of Business;
- (e) any declaration, setting aside or payment of any dividend or other direct or indirect distribution with respect to any shares in the capital of Lucas or Lucas PR or any direct or indirect redemption, purchase or other acquisition of any such shares;
- (f) any issuance or sale by Lucas or Lucas PR, or any Contract entered into by Lucas or Lucas PR, for the issuance or sale by Lucas or Lucas PR of any shares or interest in the capital of or securities convertible into or exercisable for shares or interest in the capital of Lucas or Lucas PR;

- (g) any labor activity adversely affecting Lucas or Lucas PR;
- (h) any licence, sale, assignment, transfer or disposition of any property or assets of Lucas or Lucas PR, other than sales of inventory to customers in the Ordinary Course of Business;
- (i) any write-down of the value of any inventory or any write-off as uncollectible of any accounts or notes receivable or any portion thereof of Lucas or Lucas PR in amounts exceeding \$10,000 in each instance or \$40,000 in the aggregate;
- (j) any cancellation of any debts or claims or any amendment, termination or waiver of any rights of value to Lucas or Lucas PR in amounts exceeding \$10,000 in each instance or \$40,000 in the aggregate;
- (k) other than as disclosed in Schedule 3.36 or 3.38A, any general increase in the compensation of employees of Lucas or Lucas PR (including, without limitation, any increase pursuant to any Employee Plan or commitment);
- (l) other than as disclosed in Schedule 3.36 or 3.38A, any increase in any compensation or bonus (including, without limitation, any increase pursuant to any Employee Plan or commitment) payable to any officer, employee, consultant or agent of Lucas or Lucas PR having an annual salary or remuneration in excess of \$50,000, or the execution of any employment contract with any officer or employee having an annual salary or remuneration in excess of \$50,000, or the making of any loan to, or engagement in any transaction with, any employee, officer or director of Lucas or Lucas PR;
- (m) any capital expenditures or commitments of Lucas or Lucas PR in excess of \$40,000 in the aggregate;
- (n) any forward purchase commitments, in excess of the requirements of Lucas or Lucas PR for normal operating inventories or at prices higher than the current market prices or beyond 60 days from the date of this Agreement;
- (o) any forward sales commitments other than in the Ordinary Course of Business or beyond 60 days from the date of this Agreement, or any failure to satisfy any accepted order for goods or services;
- (p) any change in the accounting or tax practices followed by Lucas or Lucas PR;
- (q) any change adopted by Lucas or Lucas PR in its depreciation or amortization policies or rates;

- (r) other than as disclosed in Schedule 3.40B, any change in the credit terms offered to customers of, or by suppliers to, Lucas or Lucas PR; or
- (s) authorized or agreed or otherwise become committed to do any of the foregoing.

3.29 Taxes. Except as set out Schedule 3.29, each of Lucas and Lucas PR has duly completed and filed on a timely basis all tax returns, declarations, elections and filings required to be filed by it and has paid all taxes which are due and payable, whether in respect of income, sales, use, payroll, (other than those associated with employees bonuses for 2002) property, business taxes or any other taxes and all assessments, reassessments, governmental charges, penalties, interest and fines due and payable by it. Each of Lucas and Lucas PR has made adequate provision on their books and records (in accordance with GAAP) for taxes payable by it for the current period and any previous period for which tax returns are not yet required to be filed. There are no actions, suits, proceedings, investigations or claims pending or, to the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR, threatened against, Lucas or Lucas PR in respect of taxes, governmental charges or assessments, nor are any material matters under discussion with any governmental authority relating to taxes, governmental charges or assessments asserted by any such authority. Lucas and Lucas PR have withheld from each payment made to any of its past or present employees, officers or directors, the amount of all taxes and other deductions required to be withheld therefrom and has paid the same to the proper tax or other receiving officers within the time required under any applicable legislation. Lucas and Lucas PR have remitted to the appropriate tax authority when required by law to do so all amounts collected by it on account of applicable legislation. Neither Lucas nor Lucas PR has requested any extension of time within which to file any return and neither Lucas nor Lucas PR has filed any waiver or other document extending the period during which an assessment, reassessment or other form of document assessing liability for tax, interest or penalties under applicable tax legislation in respect of any tax year could be issued. The financial records and tax returns of Lucas and the financial records and tax returns for Lucas PR have not been audited by the Internal Revenue Service or other applicable tax authorities since 1998. The maximum amount of unpaid tollgate taxes ("Tollgate Taxes") owed by Lucas PR is \$100,000 (exclusive of interest and penalties).

3.30 Litigation and Other Proceedings. Except as described in Schedule 3.30 and except for the Excluded Litigation described in Schedule 10.11, there is no court, administrative, regulatory or similar proceeding (whether civil, quasi-criminal or criminal), arbitration or other dispute resolution procedure, investigation or inquiry by any governmental, administrative, regulatory or similar body, or any similar matter or proceeding (collectively, "proceedings") against or involving Lucas or Lucas PR (whether in progress or threatened). No event has occurred which might give rise to any proceedings and there is no judgment, decree, injunction, rule, award or order of any court, government department, board, commission, agency, arbitrator or similar body outstanding against Lucas or Lucas PR.

- 3.31 Accounts and Attorneys.** Schedule 3.31 sets forth a true and complete list showing: (a) the name of each bank, trust company or similar institution in which Lucas and Lucas PR has accounts or safe deposit boxes, the number or designation of each such account and safe deposit box and the names of all persons authorized to draw thereon or to have access thereto; and (b) the name of each person, firm, corporation or business organization holding a general or special power of attorney from Lucas or Lucas PR and a summary of the terms thereof.
- 3.32 Directors and Officers.** Schedule 3.32 sets forth the names and titles of all the officers and directors of Lucas and Lucas PR.
- 3.33 Dividends.** Except as set out in Schedule 3.33, since December 31, 2001 in the case of Lucas and since November 30, 2001 in the case of Lucas PR, neither Lucas nor Lucas PR has, directly or indirectly, declared or paid any dividends or declared or made any other distribution on any of its shares of any class and has not, directly or indirectly, redeemed or purchased or otherwise acquired any of its outstanding shares of any class or agreed to do so.
- 3.34 Transactions with Affiliates.** Except as set out in Schedule 3.34, neither Lucas since December 31, 2002 nor Lucas PR since November 30, 2002 has made any payment or loan to, or borrowed any monies from or is otherwise indebted to, any officer, director, employee or shareholder of the Vendor, Lucas, Lucas PR or any other person who is an Affiliate of the Vendor, Lucas or Lucas PR, except as disclosed in the Lucas Financial Statements and the Lucas PR Financial Statements and except for usual employee reimbursements and compensation paid in the Ordinary Course of Business. Except as described in Schedules 3.34 or 3.36 or as disclosed in the notes to the Lucas Financial Statements and the Lucas PR Financial Statements and except for Contracts of employment, neither Lucas nor Lucas PR is a party to any Contract or Oral Contract with any officer, director, employee, shareholder of the Vendor, Lucas, Lucas PR or any other person who is an Affiliate of the Vendor, Lucas or Lucas PR. No officer, director or shareholder of the Vendor, Lucas or Lucas PR and no person who is an Affiliate of one or more of such individuals:
- (a) owns, directly or indirectly, any interest in (except for shares representing less than one per cent of the outstanding shares of any class or series of any publicly traded company), or is an officer, director, employee or consultant of, any person which is, or is engaged in business as, a competitor of the Business, Lucas or Lucas PR or a lessor, lessee, supplier, distributor, sales agent or customer of the Business, Lucas or Lucas PR;
 - (b) owns, directly or indirectly, in whole or in part, any property that Lucas or Lucas PR uses in the operation of the Business; or

- (c) has any cause of action or other claim whatsoever against, or owes any amount to, Lucas or Lucas PR in connection with the Business, except for any liabilities reflected in the Lucas Financial Statements and the Lucas PR Financial Statements and claims in the Ordinary Course of Business such as for accrued vacation pay and accrued benefits under the Employee Plans.

3.35 Environmental. Lucas, Lucas PR, the Business, the Leased Property (while in the possession or control of Lucas or Lucas PR) and all operations thereon have been and are to the knowledge of Vendor, and the Shareholder, in compliance with all applicable Environmental Laws. To the knowledge of the Vendor and the Shareholder, neither Lucas, Lucas PR, nor the Vendor has used or permitted to be used, except in compliance with all Environmental Laws, any of its properties (including the Leased Property) or facilities or any property or facility which it previously owned or leased, to generate, manufacture, process, distribute, use, treat, store, dispose of, transport or handle any Hazardous Substance. To the knowledge of the Vendor and the Shareholder, neither Lucas, Lucas PR, nor the Vendor has caused or permitted, nor has there been any release, omission, spill or discharge (which was not handled in compliance with all applicable Environmental Laws) of any Hazardous Substance on, in, around, from or in connection with any of its properties (including any of the Leased Property) or assets or their use, or any property or facility which it previously owned or leased, or any such release on or from a facility owned or operated by any third party but with respect to which Lucas or Lucas PR is or may reasonably be alleged to have liability, including, without limiting the foregoing, liability under CERCLA or any federal, state, territorial or local law with respect to off-site disposal of Hazardous Substances or other waste. To the knowledge of the Vendor and the Shareholder, all Hazardous Substances and all other wastes and other materials and substances used in whole or in part by Lucas or Lucas PR have been disposed of, treated and stored by Lucas and Lucas PR in compliance with all Environmental Laws. Neither Lucas nor Lucas PR has ever received any notice of, or been prosecuted for, non-compliance with any Environmental Laws, and neither the Vendor, Lucas nor Lucas PR has settled any allegation of non-compliance prior to prosecution. There are no notices, orders or directions relating to environmental matters requiring, or notifying the Vendor, Lucas or Lucas PR that it is or may be responsible for, any containment, clean-up, remediation or corrective action, or any work, repairs, construction or capital expenditures to be made under Environmental Laws with respect to the business or any property of Lucas or Lucas PR.

3.36 Employee Plans. Schedule 3.36 identifies each bonus, stock purchase, profit sharing, stock option, deferred compensation, severance or termination pay, insurance, medical, hospital, dental, vision care, drug, sick leave, disability, salary continuation, legal benefits, unemployment benefits, vacation, incentive or other compensation plan or arrangement or other employee benefit which is maintained, or otherwise contributed to or required to be contributed to, by Lucas or Lucas PR for the benefit of employees or former employees of Lucas or Lucas PR (the "Employee Plans"). Except for the 401(k) plans described in Schedule 3.36, neither Lucas nor Lucas PR has established any retirement, pension or any other plan which is subject to ERISA, including without limitation any employee pension benefit plan or employee welfare benefit plan subject to ERISA. The Employee Plans are the only benefit plans existing in respect of Employees.

True, correct and complete copies of all written Employee Plans have been provided to the Purchaser. The Employee Plans are duly registered where required by, and are in good standing under, all applicable laws and all applicable regulations and policies thereunder. All required employer and employee contributions relating to the Employees under the Employee Plans have been made, the respective fund or funds established under the Employee Plans are funded in accordance with applicable laws and the rules of the Employee Plans and no past service funding liabilities relating to the Employees exist thereunder. The 401(k) plans described in Schedule 3.36 meet, and since inception have met, the requirements of, and have been operated and administered in compliance with all applicable laws, regulations and rule, including, without limitation, ERISA and the Code.

3.37 Collective Agreements. Except as described in Schedule 3.37A, neither Lucas nor Lucas PR has made any Contracts with any labor union or employee association nor made commitments to or conducted negotiations with any labor union or employee association with respect to any future agreements and, except as set out in Schedule 3.37A, neither the Vendor, the Shareholder, Lucas nor Lucas PR are aware of any past or current attempts to organize or establish any labor union or employee association with respect to any employees of Lucas or Lucas PR, nor is there any certification of any such union with regard to a bargaining unit. Schedule 3.37B describes all work stoppages and strikes (legal or otherwise) that the Business has experienced in the past five years, including the dates and length of each such occurrence.

3.38 Employees. Schedule 3.38A contains a complete and accurate list as of March 31, 2003 of the names of all individuals who are full-time, part-time or casual employees or individuals engaged on contract to provide employment services or sales or other agents or representatives of Lucas and Lucas PR as of the date of this Agreement (the "Employees") specifying the length of hire, title or classification and rate of salary or hourly pay and commission or bonus entitlements (if any) for each such Employee. Schedule 3.38B lists all Employees on Schedule 3.38A, including those on lay-off who have been absent continually from work for a period in excess of one month, as well as the reason for their absence. Except as described in Schedules 3.19, 3.38C or 10.11, there are no complaints, grievances, claims, work orders, investigations or charges outstanding or claims or possible claims (including, without limitation, claims relating to employment practices including wrongful dismissal, wrongful termination, harassment, and discrimination), or to the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR, anticipated, nor are there any orders, decisions, directions or convictions currently registered or outstanding by any tribunal or agency against or in respect of Lucas or Lucas PR under or in respect of any Employment Legislation. Lucas and Lucas PR are in compliance with Employment Legislation. Except as described in Schedules 3.19, 3.38G or 10.11, to the knowledge of the Vendor, Lucas and Lucas PR, no present or former employee of Lucas or Lucas PR has any claim against Lucas or Lucas PR (whether under federal, state, territorial or provincial law, under an employment agreement or otherwise) on account of or for:

- (a) overtime pay, wages or salary for any period, other than current payroll;
- (b) vacation, time off or pay in lieu of vacation or time off, other than vacation or time off (or pay in lieu thereof) earned in respect of the current fiscal year; or
- (c) any violation of any statute, ordinance or regulation relating to minimum wage or maximum hours of work.

3.39 Employee Accruals. All accruals for unpaid vacation pay (exclusive of Lucas, for which such accruals do not apply), premiums for unemployment insurance, health premiums, accrued wages, salaries and commissions and employee benefit plan payments have been reflected in the books and records of Lucas and Lucas PR.

3.40 Customers and Suppliers. Schedule 3.40A sets out a true, correct and complete list of (i) all the customers of Lucas and Lucas PR who purchased any products from Lucas or Lucas PR during the period commencing January 1, 2002 and ending February 28, 2003 ("Customers") and (ii) all suppliers of Lucas and Lucas PR from whom either Lucas or Lucas PR purchased supplies or services in the calendar year 2002 or from whom either Lucas or Lucas PR has purchased or contracted to purchase supplies or services during the period commencing January 1, 2002 and ending March 31, 2003 ("Suppliers"), and there has been no termination or cancellation of, and no modification or change in, the business relationship of Lucas or Lucas PR with any customer or supplier or group of customers or suppliers. Neither the Vendor, the Shareholder, Lucas nor Lucas PR has any knowledge that the benefits of any relationship with any of the customers or suppliers of Lucas or Lucas PR will not continue after the Closing Date in substantially the same manner as prior to the date of the Agreement. All rebates, discounts or allowances given to customers or suppliers of Lucas and/or Lucas PR are disclosed in Schedule 3.40B and have been fully paid or fully reserved for in the Lucas Financial Statements and Lucas PR Financial Statements, as the case may be, and have been accrued in the books and records of Lucas since December 31, 2002 and in the books and records of Lucas PR since November 30, 2002. Except as disclosed in Schedule 3.40B, there has been no material change in or relating to the provision of rebates, discounts and allowances given to customers or suppliers of Lucas since December 31, 2002 and Lucas PR since November 30, 2002.

3.41 Product Warranties. Schedule 3.41 is a complete list of all express, written warranties given to purchasers of products supplied or services provided by Lucas and Lucas PR. Except as disclosed in Schedule 3.41, there are no claims or to the knowledge of the Vendor, the Shareholder, Lucas or Lucas PR any threatened claims in respect of products previously sold to Customers of the Business which might lead to a complaint from a Customer which would result in the uncollectibility of an accounts receivable. To the knowledge of the Vendor, Schedule 3.41 sets forth a description of all product recalls by a customer during the last 5 years from a customer's distribution system or the marketplace, allegedly resulting from or relating to products produced in the Business including a description of the product, the client, an explanation of the reason for the recall and the expense incurred by Lucas and Lucas PR in connection with such recalls.

3.42 Product Liability. There is no action, suit, or proceeding by or before any court or governmental authority or agency pending or to the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR threatened against or involving Lucas or Lucas PR relating to any product alleged to have been manufactured or sold by Lucas or Lucas PR and alleged to have been defective, or improperly designed or manufactured. None of the Vendor, the Shareholder, Lucas or Lucas PR has knowledge of any valid basis for any action or suit relating to any product manufactured or sold by Lucas or Lucas PR and alleged to have been defective or improperly designed or manufactured.

3.43 Undisclosed Liabilities.

To the knowledge of the Vendor, the Shareholder, Lucas or Lucas PR, Lucas and Lucas PR do not have any liabilities or obligations (whether absolute, accrued, contingent or otherwise) except:

- (a) as disclosed, reflected or reserved against in the Lucas Financial Statements and the Lucas PR Financial Statements;
- (b) as disclosed in the Schedules to this Agreement;
- (c) incurred in the Ordinary Course of Business since December 31, 2002 in the case of Lucas and since November 30, 2002 in the case of Lucas PR which, individually or in the aggregate, are not material to the Business, operations, affairs or financial conditions of Lucas or Lucas PR.

3.44 Accuracy. To the knowledge of the Vendor, the Shareholder, Lucas and Lucas PR, neither this Agreement nor any document or certificate to be provided by Lucas, Lucas PR, the Shareholder or the Vendor pursuant to this Agreement contains any untrue statement of a material fact or omits to state any material fact necessary to make any of the statements contained herein or therein not misleading.

4. REPRESENTATIONS AND WARRANTIES OF THE VENDOR, THE SHAREHOLDER, NICHOLAS J. KOLLMAN AND KEVIN J. KOLLMAN

4.1 Vendor. The Vendor and the Shareholder jointly and severally represent and warrant to the Purchaser as follows, and acknowledge that the Purchaser is relying on such representations and warranties in connection with the purchase of the Purchased Shares and Purchased Membership Rights:

- (a) The Vendor is validly existing in good standing under the laws of Maryland, its jurisdiction of organization.
- (b) The Vendor has the necessary power and capacity to enter into this Agreement and to perform its obligations hereunder. This Agreement has been duly authorized by the Vendor. Each of the agreements, contracts and instruments required by this Agreement to be delivered by the Vendor at the Time of Closing has been duly authorized by the Vendor. This Agreement has been duly executed and delivered by the Vendor and is a legal, valid and binding obligation of such

Vendor, enforceable against the Vendor by the Purchaser in accordance with its terms. At the Time of Closing, each of the agreements, contracts and instruments required by this Agreement to be delivered by such Vendor will be duly executed and delivered by such Vendor, and will be valid and binding obligations of such Vendor, enforceable in accordance with their respective terms.

4.2 Shareholder. The Shareholder represents and warrants to the Purchaser as follows and acknowledges that the Purchaser is relying on such representations and warranties in connection with its purchase of the Purchased Shares and the Purchased Membership Rights:

- (a) Nicholas J. Kollman is the sole trustee of the Kevin J. Kollman Trust, and has the power, legal right and authority to enter into this Agreement and to do all such acts and things as are required hereunder to be done, observed and performed. The Shareholder is duly settled, validly existing and in good standing under the laws of the State of Maryland. This Agreement and all other contracts and instruments required by this Agreement to be delivered by the Shareholder at the Time of Closing have been duly authorized by the trustee of the Shareholder. This Agreement is a legal, valid and binding obligation of the Shareholder, enforceable against the Shareholder by the Purchaser in accordance with its terms. At the Time of Closing, each of the agreements, contracts and instruments required by this Agreement to be delivered by the Shareholder will be valid and binding obligations of the Shareholder, enforceable in accordance with their respective terms.

4.3 Nicholas J. Kollman and Kevin J. Kollman. Nicholas J. Kollman and Kevin J. Kollman represent and warrant to the Purchaser as follows and acknowledge that the Purchaser is relying on such representations and warranties in connection with its purchase of the Purchased Shares and the Purchased Membership Rights:

- (a) each is an individual, the limited indemnity obligations set forth in Section 10.9 hereof are legal, valid and binding obligations of each individual, enforceable against each individual by the Purchaser in accordance with their terms, as limited by the provisions of Section 10.10.

5. REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

The Purchaser represents and warrants to the Vendor and the Shareholder as follows and acknowledges and confirms that the Vendor and the Shareholder are relying on such representations and warranties in connection with the sale by the Vendor of the Purchased Shares and the Purchased Membership Rights:

- 5.1 **Organization.** The Purchaser is a corporation validly existing in good standing under the laws of the State of Michigan.
- 5.2 **Corporate Power and Authorization.** The Purchaser has the corporate power and capacity to enter into this Agreement and to perform its obligations hereunder. This Agreement and each of the agreements, contract and instruments required by this Agreement to be delivered by the Purchaser at the Time of Closing has been duly authorized by the Purchaser. This Agreement has been duly executed and delivered by the Purchaser and is a legal, valid and binding obligation of the Purchaser, enforceable against the Purchaser by the Vendor, the Shareholder, Lucas and Lucas PR in accordance with its terms. At the Time of Closing, each of the agreements, contracts and instruments required by this Agreement to be delivered by the Purchaser will be duly executed and delivered by the Purchaser and will be legal, valid and binding obligations of the Purchaser, enforceable against the Purchaser by the Vendor, the Shareholder, Lucas and Lucas PR in accordance with their respective terms.
- 5.3 **No Violation.** The execution and delivery of this Agreement by the Purchaser and the consummation of the transactions provided for herein will not result in the violation of, or constitute a default under or conflict with or cause the acceleration of any obligation of the Purchaser under:
- (a) any Contract to which the Purchaser is a party or by which it is bound;
 - (b) any provision of the constating documents or by-laws or resolutions of the board of directors (or any committee thereof) or shareholders of the Purchaser;
 - (c) any judgment, decree, order or award of any court, governmental body or arbitrator having jurisdiction over the Purchaser; or
 - (d) any applicable, law, statute, ordinance, regulation or rule.
- 5.4 **Consents and Approvals.** Except as set out in Schedule 5.4, there is no requirement for the Purchaser to make any filing with, give any notice to or obtain any licence, permit, certificate, registration, authorization, consent or approval of, any governmental or regulatory authority as a condition to the lawful consummation of the transactions contemplated by this Agreement.
- 5.5 **Known Violations.** The Purchaser does not have any actual knowledge that any representation and warranty made by the Vendor or the Shareholder in connection with this Agreement is incorrect or inaccurate as at the Time of Closing, and has no knowledge of any covenant required under the terms of this Agreement to be performed at or prior to the Time of Closing by the Vendor, the Shareholder, Lucas or Lucas PR that has not been fully performed as of the Time of Closing. For the purpose of this Agreement, the "knowledge" of the Purchaser shall mean the actual knowledge of Craig Groendyke, Geoffrey Martin, Jim Searcy, Ken Turko and Ray Mass

6. COVENANTS

- 6.1 Access to Lucas and Lucas PR.** The Vendor and the Shareholder shall forthwith make available or cause to be made available to the Purchaser and its authorized representatives and, if requested by the Purchaser, provide a copy or cause for copies to be provided to the Purchaser, of all title documents, Contracts, financial statements, minute books, share certificate books, share registers, plans, reports, licences, orders, permits, title deeds, title opinions, surveys, books of account, accounting records, constating documents and all other documents, information and data relating to Lucas, Lucas PR and the Business. The Vendor and the Shareholder shall cause Lucas and Lucas PR to afford the Purchaser and its authorized representatives every reasonable opportunity to have free and unrestricted access to the Business and the property, assets, undertaking, records and documents of Lucas and Lucas PR. Subject to the rights of any other occupants of any property comprising part of the Leased Property, the Purchaser shall be entitled to cause a full inspection of the Leased Property to be made by appropriate authorities as the Purchaser or its counsel may consider necessary or advisable at any time and from time to time prior to the Closing Date in order to ensure that such properties comply with all applicable statutes, by-laws and regulations. The exercise of any rights of inspection by or on behalf of the Purchaser under this Article 6 shall not mitigate or otherwise affect the representations and warranties of the Vendor or the Shareholder hereunder which shall continue in full force and effect as provided in Section 9.1.
- 6.2 Access to Third Parties.** At the Purchaser's request, the Vendor and the Shareholder shall co-operate with the Purchaser in arranging any such meetings as the Purchaser may reasonably request with: (a) employees of Lucas and Lucas PR; (b) customers, suppliers, distributors or others who have or have had a business relationship with Lucas or Lucas PR; and (c) auditors, accountants, bankers, solicitors or any other persons engaged or previously engaged to provide services to Lucas and Lucas PR who have knowledge of matters relating to Lucas, Lucas PR and the Business.
- 6.3 Environmental Auditing.** Without limiting the generality of Sections 6.1 and 6.2, the Vendor shall permit the Purchaser's representatives or consultants to conduct a Phase I environmental audit of the Leased Property and the Vendor, the Shareholder, Lucas and Lucas PR shall co-operate in all respects therewith including, without limitation, obtaining any required or desirable consent or approval of any landlord. The Vendor and Lucas shall undertake to comply with and satisfy the recommendations related to obtaining a sewer discharge permit and a storm water permit in the AMEC Earth & Environmental, Inc. ("AMEC") Phase 1 Environmental Site Assessment for Lucas' Leased Property ("Phase 1 Report"), a copy of which was delivered to the Vendor on April 3, 2003. In respect of the requirement of the Vendor and Lucas to obtain a sewer discharge permit and a storm water permit as described in the Phase 1 Report prior to the Closing Date, Lucas shall have completed and submitted to the appropriate government authority all documentation required to obtain such permits and licenses and shall deliver copies of all such applications and supporting documents to the Purchaser prior to the Closing Date.

- 6.4 **Delivery of Books and Records.** At the Time of Closing there shall be delivered to the Purchaser by the Vendor all of the books and records of and relating to Lucas, Lucas PR and the Business. The Purchaser agrees that it will preserve the books and records so delivered to it for a period of six years from the Closing Date and will permit the Vendor or its authorized representatives reasonable access thereto in connection with the affairs of the Vendor relating to its matters, but the Purchaser shall not be responsible or liable to the Vendor for or as a result of any accidental loss or destruction of or damage to any such books or records.
- 6.5 **Use of Name.** The Vendor and the Shareholder agree that from and after the Closing Date neither the Vendor, the Shareholder, nor any of their Affiliates will use the name "Lucas-Insertco" or any part thereof in any form, including but not limited to, a business name or a corporation's name.
- 6.6 **Conduct Prior to Closing.** Without in any way limiting any other obligations of the Vendor, the Shareholder, Lucas and Lucas PR hereunder, during the period from the date hereof to the Time of Closing:
- (a) **Conduct Business in the Ordinary Course** The Vendor and the Shareholder shall cause Lucas and Lucas PR to conduct, and Lucas and Lucas PR shall conduct, the Business and the operations and affairs of Lucas and Lucas PR only in the Ordinary Course of Business;
 - (b) **No Unusual Transactions** Neither Lucas nor Lucas PR shall, without the prior written consent of the Purchaser, enter into any transaction or refrain from doing any action that, if effected before the date of this Agreement, would constitute a breach of any representation, warranty, covenant or other obligation of Lucas or Lucas PR contained herein;
 - (c) **No Material Contracts** Neither Lucas nor Lucas PR shall enter into any material supply arrangements or make any material decisions or enter into any material Contracts other than in the Ordinary Course of Business without the consent of the Purchaser, which consent shall not be unreasonably withheld;
 - (d) **Continue Insurance** The Vendor and the Shareholder shall cause Lucas and Lucas PR to continue, and Lucas and Lucas PR shall continue, to maintain in full force and effect all policies of insurance or renewals thereof now in effect, shall take out, at the expense of the Purchaser, such additional insurance as may be reasonably requested by the Purchaser and shall give all notices and present all claims under all policies of insurance in a due and timely fashion;
 - (e) **Contractual Consents** The Vendor and the Shareholder shall use their best efforts to give or obtain or cause Lucas or Lucas PR to give or obtain, and Lucas and Lucas PR shall use their best efforts to obtain, the notices, consents and approvals described in Schedule 3.24B;

- (f) ***Preserve Goodwill*** The Vendor and the Shareholder shall use their best efforts to preserve, and cause Lucas and Lucas PR to preserve intact, and Lucas and Lucas PR shall use their best efforts to preserve intact, the Business and the property, assets, operations and affairs of Lucas and Lucas PR and to carry on the Business and the affairs of Lucas and Lucas PR as currently conducted, and to promote and preserve for the Purchaser the goodwill of suppliers, customers and others having business relations with Lucas or Lucas PR;
- (g) ***Discharge Liabilities*** The Vendor and the Shareholder shall cause Lucas and Lucas PR to pay and discharge, and Lucas and Lucas PR shall pay and discharge, their respective liabilities in the Ordinary Course of Business, except those contested in good faith by Lucas or Lucas PR;
- (h) ***Corporate Action*** The Vendor and the Shareholder shall use their best efforts to take and cause Lucas and Lucas PR to take, and Lucas and Lucas PR shall use their best efforts to take, all steps to complete the transactions contemplated by this Agreement, including to take all necessary corporate action, steps and proceedings to approve or authorize, validly and effectively, the execution and delivery of this Agreement and the other agreements and documents contemplated hereby and to complete the transfer of the Purchased Shares and the Purchased Membership Rights to the Purchaser and to cause all necessary meetings of members, directors and shareholders of Lucas and Lucas PR to be held for such purpose; and
- (i) ***Best Efforts*** The Vendor and the Shareholder shall use their best efforts to satisfy the conditions contained in Section 7.1.

6.7 Delivery of Documents. The Vendor and the Shareholder shall deliver or cause to be delivered to the Purchaser all necessary transfers, assignments and other documentation reasonably required to transfer the Purchased Shares and the Purchased Membership Rights to the Purchaser with a good and valid title, free and clear of all Encumbrances.

6.8 Regulatory Consents. The Vendor and the Shareholder shall use their best efforts to obtain or cause Lucas and Lucas PR to obtain, at or prior to the Time of Closing, from all appropriate federal, state, territorial, provincial, municipal, local or other governmental or regulatory bodies, the licences, permits, consents, approvals, certificates, registrations and authorizations described in Schedule 3.24A. If, notwithstanding such efforts, the Vendor and the Shareholder are unable to obtain any of such consents and approvals, the Vendor and the Shareholder shall not be liable to the Purchaser for any breach of covenant, provided that nothing contained herein shall affect any condition precedent to the Purchaser's obligation to complete the transactions contemplated hereby. If the Purchaser completes the transactions contemplated hereby on the Closing Date notwithstanding that any of the consents and approvals referred to in Schedule 3.24A have not been obtained, the Vendor and the Shareholder shall continue after the Closing Date to use their best efforts as requested by the Purchaser from time to time in order to attempt to obtain any such consent or approval.

6.9 Tax Filings.

- (a) The Vendor shall be responsible for preparing at its cost all returns for taxes relating to Lucas and Lucas PR due for any tax periods ending on or prior to December 31, 2002 with respect to Lucas and ending on or prior to November 30, 2002 with respect to Lucas PR and shall pay all taxes with respect to such tax returns. The Vendor shall file such returns in compliance with all applicable laws.
- (b) If abbreviated returns for the period of December 31, 2002 to the Effective Date with respect to Lucas and for the period of November 30, 2002 to the Effective Date with respect to Lucas PR are required by applicable law, the Vendor shall be responsible for preparing such abbreviated returns at its cost. The Vendor shall be given access to all materials and information reasonably requested by it for such purpose. Upon the completion by the Vendor of applicable tax returns for the periods from December 31, 2002 to the Effective Date with respect to Lucas and from November 30, 2002 to the Effective Date with respect to Lucas PR, the Vendor shall forthwith pay to the Purchaser any taxes due in connection with such periods. The Vendor shall file all such returns in compliance with applicable laws. Such returns shall be prepared on the basis consistent with the historic filing practices of Lucas and Lucas PR unless otherwise required by law, regulation, rule or procedures of any taxing authority. The Vendor agrees that the tax returns relating to Lucas and Lucas PR in respect of the fiscal period ending on the Effective Date shall be based on the Lucas Closing Income Statement and the Lucas PR Closing Income Statement respectively. The Vendor shall prepare the returns in draft and will forward a copy to the Purchaser at least 45 days before the date upon which such returns are required to be filed. Each such draft return to be forwarded to the Purchaser shall be accompanied by copies of all schedules that are relevant to the preparation of such return. The Purchaser shall provide the Vendor within 15 days of receipt of the returns with its comments on the returns and the Vendor shall in good faith consider the comments and make such changes to the returns as are reasonably requested by the Purchaser. The Vendor shall be responsible for the payment of all amounts due and payable, including interest and penalties thereon, if any, on returns for any period prior to or ending on the Effective Date.
- (c) If the Vendor does not prepare returns for taxes relating to Lucas or Lucas PR in respect of tax periods prior to the Effective Date or in respect of the fiscal period ending on the Effective Date (if required by Section 6.9(b)), the Purchaser shall be entitled to prepare and file such returns at the sole expense of the Vendor. The Vendor shall be liable for all amounts owing under such returns and shall not have any recourse against the Purchaser for any reason in relation to such returns.
- (d) In the event that abbreviated returns are not required to be filed by Lucas and/or Lucas PR, Purchaser shall be responsible for preparing at its cost all returns for taxes relating to Lucas and/or Lucas PR, as the case may be, with respect to fiscal periods after December 31, 2002 with respect to Lucas and after November 30,

2002 with respect to Lucas PR. In the case of any taxable period that includes but does not end on the Effective Date (a "Straddle Period"):

- (i) real, personal and intangible property taxes ("Property Taxes") of Lucas for the tax period prior to the Effective Date shall equal the amount of such Property Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of days during the Straddle Period that are in the tax period prior to the Effective Date and the denominator of which is the number of days in the Straddle Period;
- (ii) Property Taxes of Lucas PR for the tax period prior to the Effective Date shall equal the amount of such Property Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of days during the Straddle Period that are in the tax period prior to the Effective Date and the denominator of which is the number of days in the Straddle Period;
- (iii) the taxes of Lucas (other than Property Taxes) for the tax period prior to the Effective Date shall be computed as if such taxable period ended as of the Effective Date; and
- (iv) the taxes of Lucas PR (other than Property Taxes) for the tax period prior to the Effective Date shall be computed as if such taxable period ended as of the Effective Date

6.10 Other Covenants. Forthwith after the Closing Date, the Vendor shall prepare and deliver to the Purchaser for filing by the Purchaser at Purchaser's cost the notice and request for authorization for transfer of stock and change in control of exempted business with the Puerto Rico Office of Industrial Tax Exemption. Forthwith after the Closing Date, the Vendor shall forthwith use reasonable commercial efforts to obtain the consent of Merck & Co., Inc. as listed on Schedule 3.24B.

7. CONDITIONS OF CLOSING

7.1 Conditions of Closing in Favor of the Purchaser. The purchase and sale of the Purchased Shares and the Purchased Membership Rights is subject to the following terms and conditions for the exclusive benefit of the Purchaser, to be fulfilled or performed at or prior to the Time of Closing:

- (a) ***Representations, Warranties and Covenants*** The representations and warranties of the Vendor, the Shareholder, Lucas and Lucas PR contained in this Agreement shall be true and correct at the Time of Closing, with the same force and effect as if such representations and warranties were made at and as of such time, and all of the terms, covenants and conditions of this Agreement to be complied with or performed by the Vendor, the Shareholder, Lucas and Lucas PR at or before the Time of Closing shall have been complied with or performed;

- (b) **Regulatory Consents** There shall have been obtained, from all appropriate federal, provincial, municipal or other governmental or administrative bodies, such licences, permits, consents, approvals, certificates, registrations and authorizations as are required to be obtained by the Vendor to permit the change of ownership of the Purchased Shares and the Purchased Membership Rights contemplated hereby including, without limitation, those described in Schedule 3.24A (but for greater certainty the regulatory consent of the Puerto Rico Office of Industrial Tax Exemption for the transfer of stock and change in control of an exempted business will not be obtained prior to the Closing Date);
- (c) **Contractual Consents** The Vendor and the Shareholder shall have given or obtained the notices, consents and approvals described in Schedule 3.24B, in each case in form and substance satisfactory to the Purchaser, acting reasonably;
- (d) **Material Adverse Change** There shall have been no material adverse changes in the condition (financial or otherwise), assets, liabilities, operations, earnings, business or prospects of Lucas since December 31, 2002 or Lucas PR since November 30, 2002;
- (e) **No Action or Proceeding** No legal or regulatory action or proceeding shall be pending or threatened by any person which would, in the opinion of the Purchaser, acting reasonably, enjoin, restrict or prohibit
 - (i) the purchase and sale of the Purchased Shares and the Purchased Membership Rights contemplated hereby; or
 - (ii) the Purchaser from carrying on the Business in the manner in which Lucas and Lucas PR are carrying on the Business at the date hereof;
- (f) **No Material Damage** No material damage by fire or other hazard to the whole or any material part of the property or assets of Lucas or Lucas PR shall have occurred from the date hereof to the Time of Closing;
- (g) **No Adverse Legislation** No legislation (whether by statute, regulation, order-in-council, notice of ways and means motion, by-law or otherwise) shall have been enacted, introduced or tabled which, in the opinion of the Purchaser, acting reasonably, adversely affects or may adversely affect the Business;
- (h) **Discharge of Encumbrances** The Vendor and the Shareholder shall have delivered or caused to be delivered to the Purchaser evidence in form and substance satisfactory to the Purchaser and its counsel that all Encumbrances (other than Permitted Encumbrances) affecting Lucas or Lucas PR have been discharged in full, other than any Encumbrances which, pursuant to the terms of this Agreement, are not required to be discharged;

- (i) **Legal Matters** All actions, proceedings, instruments and documents required to implement this Agreement, or instrumental thereto, and all legal matters relating to the purchase of the Purchased Shares and the Purchased Membership Rights, including title of the Vendor to the Purchased Shares and the Purchased Membership Rights, shall have been approved as to form and legality by Lang Michener, counsel to the Purchaser, acting reasonably;
- (j) **Non-Competition Agreement** The Vendor, Nicholas J. Kollman and Kevin J. Kollman shall have executed and delivered to the Purchaser a non-competition agreement in the form of the non-competition agreement annexed hereto as Schedule 7.1(j);
- (k) **Employment** Each of Kevin J. Kollman, Peggy Slendorn-Koppe and Luis Rosada Garcia shall have executed and delivered to Lucas an employment agreement substantially in the form of the employment agreement annexed hereto as Schedule 7.1(k);
- (l) **Legal Opinion** The Vendor and the Shareholder shall have delivered to the Purchaser a legal opinion of Vendor's Counsel, in the form annexed hereto as Schedule 7.1(l);
- (m) **Resignation of Directors and Officers** Such directors and officers of Lucas and Lucas PR as the Purchaser may specify shall have resigned in favor of nominees of the Purchaser effective as of the Time of Closing;
- (n) **Resignation of Auditors** The auditors of Lucas shall have resigned, effective as of the Time of Closing;
- (o) **Releases by, the Shareholder, Directors and Officers** The Shareholder and such directors and officers of Lucas and Lucas PR as the Purchaser may specify shall have executed and delivered, at the Time of Closing, releases in favor of Lucas and Lucas PR in the form annexed hereto as Schedule 7.1(o);
- (p) **Compliance with Permit Recommendation of Phase 1 Report.** The Vendor shall have provided evidence satisfactory to the Purchaser, acting reasonably, that the Vendor and Lucas have prepared and submitted to the appropriate authorities the applications to obtain the sewer discharge permit and the storm water permit as described in the Phase 1 Report and shall have provided copies of the license and permit applications which the Vendor and Lucas are required to provide pursuant to Section 6.3;
- (q) **Deliveries** The deliveries of the Vendor and the Shareholder under Article 8 shall have been completed in accordance with the terms thereof. Delivery may be made via the exchange of counterpart facsimile copies of documents with original documents to be delivered via overnight delivery.

7.2 Non-Performance by the Vendor, the Shareholder, Lucas or Lucas PR. If any of the conditions contained in Section 7.1 shall not be performed or fulfilled at or prior to the Time of Closing in the opinion of the Purchaser, acting reasonably, the Purchaser may, by notice to the Vendor and the Shareholder, terminate this Agreement and the obligations of the Purchaser to complete the transactions contemplated by this Agreement other than the obligations contained in sections 11.5, 11.6 and 11.7, shall be terminated, provided that whether or not the Purchaser so terminates its obligations, the Purchaser may also bring an action pursuant to Article 10 against the Vendor or the Shareholder for damages suffered by the Purchaser where the non-performance or non-fulfillment of the relevant condition is as a result of a breach of covenant, representation or warranty by the Vendor or the Shareholder. Any such condition may be waived in whole or in part by the Purchaser without prejudice to any claims it may have for breach of covenant, representation or warranty.

7.3 Conditions of Closing in Favor of the Kollman Parties. The purchase and sale of the Purchased Shares and the Purchased Membership Rights is subject to the following terms and conditions for the exclusive benefit of the Kollman Parties, to be fulfilled or performed at or prior to the Time of Closing:

- (a) ***Representations, Warranties and Covenants*** The representations and warranties of the Purchaser contained in this Agreement shall be true and correct at the Time of Closing, with the same force and effect as if such representations and warranties were made at and as of such time, and all of the terms, covenants and conditions of this Agreement to be complied with or performed by the Purchaser at or before the Time of Closing shall have been complied with or performed;
- (b) ***Regulatory Consents*** There shall have been obtained, from all appropriate federal, provincial, state, territorial, municipal or other governmental or administrative bodies, such licences, permits, consents, approvals, certificates, registrations and authorizations as are required to be obtained by the Purchaser to permit the change of ownership of the Purchased Shares and the Purchased Membership Rights contemplated hereby including, without limitation, those described in Schedule 5.4; and
- (c) ***Indemnification Agreement*** Either the Allfirst Indebtedness shall have been paid and satisfied in full or the Purchaser shall have delivered the Indemnification Agreement to the Kollman Enterprises, Inc. and Nicholas J. Kollman.

7.4 Non-Performance by the Purchaser. If any of the conditions contained in Section 7.3 shall not be performed or fulfilled at or prior to the Time of Closing to the satisfaction of the Vendor, acting reasonably, the Vendor may, by notice to the Purchaser, terminate this Agreement and the obligations of the Vendor and the Purchaser under this Agreement other than the obligations contained in sections 11.5, 11.6 and 11.7, shall be terminated, provided that the Vendor may also bring an action pursuant to Article 10 against the Purchaser for damages suffered by the Vendor where the non-performance or non-fulfillment of the relevant condition is as a result of a breach of covenant, representation or warranty by the Purchaser. Any such condition may be waived in whole or in part by

the Vendor without prejudice to any claims it may have for breach of covenant, representation or warranty.

- 7.5 Consents.** In the event that the Purchaser completes the transaction provided herein on the Closing Date without all of the consents and approvals referred to in Section 3.24 having been obtained, the Vendor agrees to hold any Contracts, licences, permits or authorizations in trust for the benefit of the Purchaser and agrees to take all such action and do or cause to be done all such things as shall be reasonably required in order that benefits of such Contracts, licences, permits or other authorizations are provided to the Purchaser.

8. CLOSING ARRANGEMENTS

- 8.1 Place of Closing.** The closing shall take place at the Time of Closing at the offices of the Vendor's Counsel at 401 East Pratt Street, 9th Floor, Baltimore, Maryland 21202.

- 8.2 Transfer.** At the Time of Closing, upon fulfillment of all the conditions set out in Article 7 which have not been waived in writing by the Purchaser or the Vendor, the Vendor shall deliver or cause to be delivered to the Purchaser the following:

- (i) certificates respecting all the Purchased Shares duly endorsed in blank for transfer with all exigible security transfer taxes paid, and will cause transfers of such shares to be duly and regularly recorded in the name of the Purchaser, or its nominee(s); and
- (ii) an assignment of the Vendor's membership interest in Lucas, together with an executed copy of the operating agreement of Lucas (the "Operating Agreement") showing the Purchaser as having full benefit of 100% of the Lucas Membership Rights,

and will cause meetings of the board of directors (and their members or shareholders if needed) of Lucas and Lucas PR to be held at which the directors and officers of Lucas and Lucas PR specified by the Purchaser will resign in favor of nominees of the Purchaser whereupon, subject to all other terms and conditions hereof being complied with, payment of the Purchase Price shall be paid and satisfied in the manner provided in Article 2.

- 8.3 Closing Deliveries.** At Closing, the following shall be completed all in form and substance satisfactory to the recipient, acting reasonably:

- (a) (i) Lucas and each of Kevin J. Kollman and Peggy Slendorn-Koppe, and Luis Rosado Garcia shall execute and deliver an employment agreement substantially in the form of the employment agreement annexed hereto as Schedule 7.1(k);

- (ii) the Purchaser shall have delivered funds and the Promissory Note to the Vendor as set out in Section 2.2; and
 - (iii) the Purchaser, the Vendor and each of Nicholas J. Kollman and Kevin J. Kollman shall execute and deliver a non-competition agreement in form of the non-competition agreement annexed to Schedule 7.1(j).
- (b) In addition to the deliveries set out in Section 8.3(a), the Purchaser shall receive:
- (i) the opinion of the Vendor's Counsel attached hereto as Schedule 7.1(l) duly signed;
 - (ii) copies of the consents, authorizations and approvals referred to in Subsection 3.24.
 - (iii) certificates of good standing for each of Lucas, Lucas PR and the Vendor in their jurisdictions of incorporation and each and every jurisdiction in which they carry on business, including but not limited to a certificate of good standing or its equivalent, for Lucas PR in Puerto Rico;
 - (iv) an officer's certificate of the President of the Vendor certifying the constating documents of the Vendor and the resolutions authorizing the execution, delivery and performance by the Vendor of this agreement and any other documents required to be provided hereunder;
 - (v) an officer's certificate of the President of Lucas certifying the constating documents of Lucas and the resolutions authorizing the execution, delivery and performance by Lucas of this agreement and any other documents required to be provided hereunder;
 - (vi) an officer's certificate of the President of Lucas PR certifying the constating documents and by-laws of Lucas PR and authorizing the execution, delivery and performance by Lucas PR of any other documents required to be provided hereunder;
 - (vii) resignations from such directors and officers of Lucas and Lucas PR as the Purchaser may specify;
 - (viii) a resignation from the auditors of Lucas and Lucas PR;
 - (ix) releases in favor of Lucas and Lucas PR of the Vendor and such directors and officers of Lucas and Lucas PR as the Purchaser may specify in the form annexed hereto as Schedule 7.1(o);

- (x) [Intentionally deleted]; and
 - (xi) such other documents relevant to the closing of the transactions contemplated hereby as the Purchaser, acting reasonably, may request.
- (c) In addition to the deliveries set out in Section 8.3(a), the Vendor shall receive:
- (i) copies of the consents, authorizations and approvals referred to in Subsection 5.4;
 - (ii) a certificate of good standing of the Purchaser;
 - (iii) an officers certificate of the President of the Purchaser certifying the constating documents and by-laws of the Purchaser and the resolutions authorizing the execution, delivery and performance by the Purchaser of this agreement and any other documents required to be provided hereunder;
 - (iv) [Intentionally deleted]; and
 - (v) such other documents relevant to the closing of the transactions contemplated hereby as the Vendor, acting reasonably, may request.

8.4 Transfer of Title and Effective Date. The transfer of title to the Purchaser of the Purchased Shares and the Purchased Membership Rights shall occur on the Closing Date upon the payment of the Purchase Price in accordance with Section 2.2. Provided that the transactions contemplated herein are completed, the economic and accounting aspects of this transaction shall be deemed to have been effective as at the 12.01 a.m. Eastern Standard Time on the Effective Date. During the Interim Period, the Vendor shall not have caused or permitted any dividends or any other distributions on or payments in respect of the Purchased Shares or the Lucas Membership Rights to be made by Lucas or Lucas PR, and the Vendor shall account to the Purchaser for any dividends, distributions or payments made during the Interim Period. Upon such closing, the Purchaser shall be deemed to be entitled to all shareholders' equity accrued or accruing to Lucas and Lucas PR on and after the Effective Date.

8.5 Further Assurances. Each party to this Agreement covenants and agrees that, from time to time subsequent to the Closing Date, it will, at the request and expense of the requesting party, execute and deliver all such documents, including, without limitation, all such additional conveyances, transfers, consents and other assurances and do all such other acts and things as any other party hereto, acting reasonably, may from time to time request be executed or done in order to better evidence or perfect or effectuate any provision of this Agreement or of any agreement or other document executed pursuant to this Agreement or any of the respective obligations intended to be created hereby or thereby.

- 8.6 **Allfirst Indebtedness.** The Purchaser hereby agrees to execute and deliver on the Closing Date an Indemnification Agreement ("Indemnification Agreement") to Kollman Enterprises, Inc. and Nicholas J. Kollman in form and substance as Schedule 8.6 attached hereto in relation to certain guarantees provided by Kollman Enterprises, Inc. and Nicholas J. Kollman in relation to Indebtedness currently owed by Lucas or Lucas PR to Allfirst Bank (now known as Manufacturers and Traders Trust Company) ("Allfirst Indebtedness"). The Purchaser further agrees that within 90 days after the Closing Date, the Purchaser will either pay and satisfy the Allfirst Indebtedness in full, or obtain from Allfirst Bank such releases and terminations as may be necessary to discharge Kollman Enterprises, Inc. and Nicholas J. Kollman from the guarantees described in the Indemnification Agreement provided by Kollman Enterprises, Inc. and Nicholas J. Kollman with respect to the Allfirst Indebtedness.

9. **SURVIVAL OF COVENANTS, REPRESENTATIONS AND WARRANTIES**

- 9.1 **Survival of Covenants, Representations and Warranties.** Except to the extent the Purchaser has actual knowledge prior to the Time of Closing that a representation or warranty is incorrect or that a covenant has not been performed, the covenants, representations and warranties contained in this Agreement and in all certificates and documents delivered pursuant to or contemplated by this Agreement shall survive the closing of the transactions contemplated hereby and shall terminate at the expiration of 18 months following the Closing Date, except that:

- (a) the representations and warranties set out in Sections 3.5, 3.6 and 3.10 (and the corresponding representations and warranties set out in the certificates to be delivered pursuant to Section 7.1(a)) shall survive and continue in full force and effect until the expiration of the applicable statute of limitations;
- (b) the representations and warranties set out in Section 3.35 (and the corresponding representations and warranties set out in the certificates to be delivered pursuant to Section 7.1(a)) shall survive and continue in full force and effect and shall terminate at the expiration of three (3) years following the Closing Date;
- (c) the representations and warranties set out in Section 3.29 (and the corresponding representations and warranties set out in the certificates to be delivered pursuant to Section 7.1(a)) shall survive the closing of the transactions contemplated hereby and continue in full force and effect until, but not beyond, 120 days following the expiration of the period, if any, during which an assessment, reassessment or other form of recognized document assessing liability for tax, interest or penalties under applicable tax legislation in respect of any taxation year to which such representations and warranties extend could be issued under such tax legislation to Lucas, Lucas PR or the Vendor as the case may be, provided Lucas, Lucas PR or the Vendor, as the case may be, did not file any waiver or other document extending such period;

- (d) the obligations set forth in Section 2.7, Section 6.9 and the indemnification obligations set forth in Sections 8.6, 10.1(c), 10.1(d) and 10.11 hereof shall survive and continue in full force and effect without limitation of time;
- (e) a claim for any breach of any of the representations and warranties contained in this Agreement or in any agreement, instrument, certificate or other document executed or delivered pursuant hereto involving fraud or fraudulent misrepresentation may be made at any time following the Closing Date, subject only to applicable limitation periods imposed by law; and
- (f) no claim for breach of any other representation, warranty or covenant shall be valid unless the party against whom such claim is made has been given notice thereof before the expiry of the 18 month limitation period or other applicable limitation period, as the case may be.

10. INDEMNIFICATION

10.1 Indemnification by the Vendor and the Shareholder. Subject to the limitations set forth in Section 10.10, the Vendor and the Shareholder agree to indemnify and save harmless, on a joint and several basis, the Purchaser, from all Losses suffered or incurred by the Purchaser as a result of or in connection with:

- (a) any breach by the Vendor or the Shareholder of, or any inaccuracy of any representation or warranty of the Vendor or the Shareholder, contained in this Agreement or in any agreement, certificate or other document delivered pursuant hereto, of which the Purchaser does not have actual knowledge (within the meaning of Section 5.5) prior to the Time of Closing;
- (b) any breach or non-performance by the Vendor, the Shareholder, Lucas or Lucas PR of any covenant to be performed by it which is contained in this Agreement or in any agreement, certificate or other document delivered pursuant hereto, of which, for such covenants that are to be performed at or prior to the Time of Closing, the Purchaser does not have actual knowledge (within the meaning of Section 5.5) of such breach or non-performance prior to the Time of Closing;
- (c) any claims, demands, costs and expenses relating to the Excluded Litigation;
- (d) any claims, demands, costs and reasonable and necessary expenses arising from or in any way connected to the joint filing of tax returns by Lucas and the Vendor; and
- (e) any claims, demands, costs and reasonable and necessary expenses arising for any legally required withholdings on bonuses paid to employees and officers, or for any fines or penalties resulting from Lucas' failure to possess a sewer discharge permit or a storm water permit as described in the Phase 1 Report.

- 10.2 Indemnification by the Purchaser.** The Purchaser agrees to indemnify and save harmless the Vendor, and the Shareholder from all Losses suffered or incurred by the Vendor and the Shareholder as a result of or in connection with: (a) any breach by the Purchaser of or any inaccuracy of any representation or warranty contained in this Agreement or in any agreement, instrument, certificate or other document delivered pursuant hereto of which the Vendor or the Shareholder does not have actual knowledge prior to the Time of Closing; and (b) any breach or non-performance by the Purchaser of any covenant to be performed by it which is contained in this Agreement or in any agreement, certificate or other document delivered pursuant hereto, of which, for such covenants that are to be performed at or prior to the Time of Closing, the Vendor or the Shareholder does not have actual knowledge of such breach or non-performance prior to the Time of Closing.
- 10.3 Notice of Claim.** In the event that a party (the "Indemnified Party") shall become aware of any claim, proceeding or other matter (a "Claim") in respect of which another party (the "Indemnifying Party") agreed to indemnify the Indemnified Party pursuant to this Agreement, the Indemnified Party shall promptly give written notice thereof to the Indemnifying Party. Such notice shall specify whether the Claim arises as a result of a claim by a person against the Indemnified Party (a "Third Party Claim") or whether the Claim does not so arise (a "Direct Claim"), and shall also specify with reasonable particularity (to the extent that the information is available) the factual basis for the Claim and the amount of the Claim, if known. If, through the fault of the Indemnified Party, the Indemnifying Party does not receive notice of any Claim in time to contest effectively the determination of any liability susceptible of being contested, the Indemnifying Party shall be entitled to set off against the amount claimed by the Indemnified Party the amount of any Losses incurred by the Indemnifying Party resulting from the Indemnified Party's failure to give such notice on a timely basis.
- 10.4 Direct Claims.** With respect to any Direct Claim (other than Excluded Litigation), following receipt of notice from the Indemnified Party of the Claim, the Indemnifying Party shall have 30 days to make such investigation of the Claim as is considered necessary or desirable. For the purpose of such investigation, the Indemnified Party shall make available to the Indemnifying Party the information relied upon by the Indemnified Party to substantiate the Claim, together with all such other information as the Indemnifying Party may reasonably request. If both parties agree at or prior to the expiration of such 30-day period (or any mutually agreed upon extension thereof) to the validity and amount of such Claim, the Indemnifying Party shall immediately pay to the Indemnified Party the full agreed-upon amount of the Claim, failing which the matter shall be determined by the court of competent jurisdiction specified herein.
- 10.5 Third Party Claims.** With respect to any Third Party Claim (other than Excluded Litigation), the Indemnifying Party shall have the right, at its expense, to participate in or assume control of the negotiation, settlement or defense of the Claim and, in such event, the Indemnifying Party shall reimburse the Indemnified Party for all the Indemnified Party's reasonable and necessary out-of-pocket expenses in connection with the Third Party Claim prior to the assumption of control. If the Indemnifying Party elects to assume such control, the Indemnified Party shall have the right to participate in the

negotiation, settlement or defense of such Third Party Claim and to retain counsel to act on its behalf, provided that the fees and disbursements of such counsel shall be paid by the Indemnified Party unless the Indemnifying Party consents to the retention of such counsel or unless the named parties to any action or proceeding include both the Indemnifying Party and the Indemnified Party and the representation of both the Indemnifying Party and the Indemnified Party by the same counsel would be inappropriate due to the actual or potential differing interests between them (such as the availability of different defences). If the Indemnifying Party, having elected to assume such control, thereafter fails to defend the Third Party Claim within a reasonable time, the Indemnified Party shall be entitled to assume such control, and the Indemnifying Party shall be bound by the results obtained by the Indemnified Party with respect to such Third Party Claim. If any Third Party Claim is of a nature such that: (a) the Indemnified Party is required by applicable law or the order of any court, tribunal or regulatory body having jurisdiction; or (b) it is necessary in the reasonable view of the Indemnified Party acting in good faith and in a manner consistent with reasonable commercial practices in respect of: (i) a Third Party Claim by a customer relating to products or services supplied by the Business; or (ii) a Third Party Claim relating to any Contract which is necessary to the ongoing operations of the Business or any material part thereof by a reasonable and prudent operator in substantially the same manner in which it has heretofore been operated by Lucas and Lucas PR in order to avoid material damage to the relationship between the Indemnified Party and any of its Customers or to preserve the rights of the Indemnified Party under such an essential Contract, to make a payment to any Person (a "Third Party") with respect to the Third Party Claim before the completion of settlement negotiations or related legal proceedings, as the case may be, the Indemnified Party may make such payment and the Indemnifying Party shall, forthwith after demand by the Indemnified Party, reimburse the Indemnified Party for such payment. If the amount of any liability of the Indemnified Party under the Third Party Claim in respect of which such payment was made, as finally determined, is less than the amount which was paid by the Indemnifying Party to the Indemnified Party, the Indemnified Party shall, forthwith after receipt of the difference from the Third Party, pay the amount of such difference to the Indemnifying Party. If such a payment, by resulting in settlement of the Third Party Claim, precludes a final determination of the merits of the Third Party Claim and the Indemnified Party and the Indemnifying Party are unable to agree whether such payment was reasonable in the circumstances having regard to the amount and merits of the Third Party Claim, such dispute shall be submitted to court.

- 10.6 Settlement of Third Party Claims.** If the Indemnifying Party fails to assume control of the defense of any Third Party Claim, the Indemnified Party shall have the exclusive right to contest, settle or pay the amount claimed. Whether or not the Indemnifying Party assumes control of the negotiation, settlement or defense of any Third Party Claim, the Indemnifying Party shall not settle any Third Party Claim without the written consent of the Indemnified Party, which consent shall not be unreasonably withheld or delayed; provided, however, that the liability of the Indemnifying Party shall be limited to the proposed settlement amount if any such consent is not obtained for any reason.

- 10.7 Co-operation.** The Indemnified Party and the Indemnifying Party shall co-operate fully with each other with respect to Third Party Claims, and shall keep each other fully advised with respect thereto (including supplying copies of all relevant documentation promptly as it becomes available).
- 10.8 Exclusivity.** The provisions of this Article 10 shall apply to any Claim for breach of any covenant, representation, warranty or other provision of this Agreement or any agreement, certificate or other document delivered pursuant hereto (other than a claim for specific performance or injunctive relief) with the intent that all such Claims shall be subject to the limitations and other provisions contained in this Article 10.
- 10.9 Guaranty of Nicholas J. Kollman and Kevin J. Kollman.** Subject to the limitations upon liability set forth below in Section 10.10, Nicholas J. Kollman and Kevin J. Kollman jointly and severally agree to guaranty to the Purchaser the payment of the obligations of the Vendor and the Shareholder for Losses arising in connection with Section 10.1, including without limitation Losses arising as a result of a breach of the representations and warranties set forth in Sections 3.5, 3.6, or 3.10. This guarantee is a direct absolute unconditional irrevocable present continuing guarantee by each of Nicholas J. Kollman and Kevin J. Kollman of performance and payment and is a direct and primary obligation of each of Nicholas J. Kollman and Kevin J. Kollman, and is in no way conditional or contingent upon any attempt to enforce performance upon, or collection from, the Vendor or the Shareholder or upon any other event, contingency or circumstances whatsoever. This shall be a continuing guarantee and shall cover and secure any amounts owing by the Vendor or the Shareholder under this Agreement and the Purchaser shall not be obligated to exhaust its recourse against the Vendor or the Shareholder before being entitled to payment from each and all of Nicholas J. Kollman and Kevin J. Kollman of all and every of the obligations hereby guaranteed. The obligations of the undersigned set forth herein shall not be subject to any deduction, diminution, abatement, set off, recoupment, suspension, deferment, reduction or defense (other than full and strict compliance by each of Nicholas J. Kollman and Kevin J. Kollman of its obligations hereunder) and shall remain in full force and effect without regard to, and shall not be released, discharged or in any way affected by, any circumstances or conditions whatsoever other than by full and strict compliance by each of Kevin J. Kollman and Nicholas J. Kollman of their obligations hereunder.

10.10 Limitation upon Liabilities of Kollman Parties.

- (a) Subject to the provisions of this Section 10.10, no liability shall arise against any of the Kollman Parties for any Losses (other than Losses arising pursuant to Sections 2.7, 6.9, 10.1(c), 10.1(d) 10.11 and 11.2 and for Losses arising as a result of a breach of the representations and warranties set forth in Sections 3.5, 3.6 or 3.10) until the Losses exceed the Deductible Amount, in which event, and subject to the limitations set forth in this Section 10.10, the liability of the Kollman Parties hereunder shall be for Losses in excess of the Deductible Amount. The Purchaser agrees that it will first seek payment or reimbursement due to the Purchaser for the amount of any Losses by offsetting the amounts of any such Losses or claims against the unpaid balance (if any) of the Promissory Note in

accordance with the procedures set forth in Section 2.6 prior to attempting to collect any such Losses or claims from any of the Kollman Parties. The Purchaser further acknowledges and agrees that notwithstanding anything to the contrary set forth in this Agreement or in any other document or writing, but subject to the provisions of Section 10.10(b) set forth below, the maximum total aggregate monetary liability of the Kollman Parties for any Losses or for any claims of any kind or nature (including Claims) of the Purchaser or anyone claiming through or on behalf of the Purchaser with respect to this Agreement and the transactions described herein shall not exceed the total sum of \$1,500,000 plus the amount of the then unpaid principal balance (if any) of the Promissory Note. The liability of the applicable Kollman Parties for Losses arising pursuant to Sections 2.7, 6.9, 10.1(c), 10.1(d), 10.11 and 11.2 and for Losses arising as a result of a breach of the representations and warranties set forth in Sections 3.5, 3.6 or 3.10 shall be calculated without regard to the Deductible.

- (b) Notwithstanding the monetary limitation of liability set forth above in Section 10.10(a), the total aggregate liability of the Vendor and the Shareholder to the Purchaser in accordance with the stated terms of this Agreement for the breach of the covenants set forth in Sections 2.7, 6.9, 10.1(c), 10.1(d), 10.11, and 11.2 and for the breach of any representation or warranty set forth in Sections 3.5, 3.6, and 3.10, and the monetary liability of Nicholas J. Kollman and Kevin J. Kollman for the breach of the warranties set forth in Sections 3.5, 3.6 and 3.10, shall be limited in the aggregate to the amount of the Purchase Price.
- (c) The Vendor, the Shareholder, Nicholas J. Kollman and Kevin J. Kollman acknowledge that notwithstanding anything to the contrary set forth in this Agreement or in any other document or writing, the maximum total aggregate monetary liability of the Purchaser for any Losses or for any claims of any kind or nature (including Claims) of the Vendor, Shareholder, Nicholas J. Kollman or Kevin J. Kollman or anyone claiming through or on behalf of any of them with respect to this Agreement and the transactions described herein (other than under the Indemnification Agreement for which there is no maximum total aggregate monetary limit) shall not exceed \$1,500,000.

10.11 Excluded Litigation. Notwithstanding any other provision of this Agreement to the contrary, the Vendor and the Shareholder shall jointly and severally indemnify and save harmless the Purchaser, Lucas and Lucas PR and their respective directors, officers, employees and agents, from all Losses suffered or incurred by the Purchaser, Lucas and/or Lucas PR and their respective directors, officers, employees and agents, as a result of or arising directly or indirectly out of or in connection with the court proceedings described in Schedule 10.11 (collectively, the "Excluded Litigation"). The Purchaser agrees that the Vendor and the Shareholder respectively shall have the exclusive right, at their expense, to pursue the Excluded Litigation in the name of the Vendor, Lucas, or Lucas PR, and agrees that the Vendor and the Shareholders respectively shall be entitled to all benefits, including without limitation judgments, decrees, injunctions, and monetary awards, which may result directly or indirectly from the Excluded Litigation. The Purchaser agrees that Lucas and Lucas PR shall use commercially reasonable efforts to

cooperate and assist the Vendor and the Shareholder, at the expense (to the extent that there are any third party out of pocket expenses) of the Vendor and the Shareholder, in the defense and prosecution of the Excluded Litigation. If the Excluded Litigation has not been concluded or settled prior to three (3) years after the Closing Date, Lucas and Lucas PR shall have an irrevocable option, on written notice to the Vendor to assign any or all such litigation matters to the Vendor. If the option is exercised, Lucas and Lucas PR, as the case may be, and the Vendor, agree to use best efforts to effect such assignment and to cause such assignment to be registered with the applicable courts. Notwithstanding such assignment, the indemnity obligations of the Vendor and the Shareholder under this Section 10.11 shall continue hereunder. Any out-of-pocket costs associated with such assignment and registration shall be paid by the Vendor.

11. MISCELLANEOUS

11.1 Confidentiality of Information. If, for any reason, the transactions contemplated by this Agreement shall fail to be completed, the Purchaser for itself and its employees, servants and agents agrees to keep confidential and to refrain from using any information concerning the business and affairs of the Vendor, Lucas and Lucas PR which it may have acquired in connection with the transactions contemplated by this Agreement and in addition, shall return all records or documents received from the Vendor relating to Lucas or Lucas PR. The Purchaser's obligations in this respect shall not apply to any information which:

- (a) is in the public domain at the time of its disclosure to the Purchaser;
- (b) subsequently comes into the public domain without breach by the Purchaser of its obligations under this Section 11.1;
- (c) the Purchaser can show was in its possession prior to its disclosure to the Purchaser in connection with these transactions; or
- (d) is or has been disclosed to the Purchaser by any person otherwise than at the request or occurrence of the Vendor.

11.2 Collectibility of Accounts Receivable. In the event that any of the accounts receivable which are 120 days old or older as of the Effective Date (the "Aged Receivables") are not collected by the Purchaser within 180 days of the Closing Date, the Vendor shall repurchase from the Purchaser those accounts receivable. The purchase price for such Accounts Receivable repurchased by the Vendor shall be paid forthwith by certified check by the Vendor to the Purchaser. The Purchaser shall take all reasonable efforts to collect the Aged Receivables within the said 180 day period, and shall notify Vendor within 120 days of the Closing Date of any uncollected accounts. If any Aged Receivables are outstanding at the end of such 180 day period, the Purchaser shall assign to the Vendor the accounts representing such Aged Receivables without recourse and shall deliver all documents in its possession related to those accounts to assist the Vendor in attempting to collect the said accounts; provided however that the Vendor shall not make any independent attempts to further collect said accounts without the prior written

consent of the Purchaser. In the event that the Purchaser does not provide the Vendor with written consent to collect any of the Aged Receivables assigned back to the Vendor within ten (10) Business Days of such assignment, the Purchaser shall forthwith pay fifty percent (50%) of the total amount of such assigned account receivable to the Vendor. In the event that the Purchaser collects any of the Aged Receivables assigned back to the Vendor, the Purchaser shall forthwith pay the amount so collected to the Vendor.

11.3 Notices.

- (a) Any notice or other communication required or permitted to be given hereunder shall be in writing and shall be delivered in person, transmitted by telecopy or similar means of recorded electronic communication, addressed as follows:

if to the Vendor:

Kollman & Associates, LLC
P.O. Box 9191,
Baltimore, Maryland
21222

with a copy to:

Gebhardt & Smith LLP
401 East Pratt Street, 9th Floor
Baltimore, Maryland 21202
Attention: Lawrence J. Gebhardt
Telecopier: (410) 385-5119

if to the Purchaser:

CCL Label, Inc.
161 Worchester Road, Suite 410
Framingham, MA 01701
Attention: President
Telecopier: (508) 872-7671

with a copy to:

CCL Industries Inc.
105 Gordon Baker Road, Suite 800
Willowdale, Ontario
M2H 3P8
Attention: Richard Zakaib
Telecopier: (416) 756-8562

with a copy to:

Lang Michener
P.O. Box 747, Suite 2500
BCE Place, 181 Bay Street
Toronto, Ontario M5J 2T7
Attention: Geoffrey Myers
Telecopier: (416) 365-1719

if to Lucas or Lucas PR:

Lucas-Insertco Pharmaceutical Printing Company of Maryland LLC
1831-D Portal Street
Baltimore, Maryland 21224
Attention: Chairman and President
Telecopier: (410) 633-4609

if to Shareholder:

The Kevin J. Kollman Family Trust,
c/o Nicholas J. Kollman, Trustee
6760 SE South Marina Way
Stuart, FL 34996

with a copy to:

Gebhardt & Smith LLP
401 East Pratt Street, 9th Floor
Baltimore, Maryland 21202
Attention: Lawrence J. Gebhardt
Telecopier: (410) 385-5119

if to Nicholas J. Kollman:

Nicholas J. Kollman
6760 SE South Marina Way
Stuart, FL 34996

with a copy to:

Gebhardt & Smith LLP
401 East Pratt Street, 9th Floor
Baltimore, Maryland 21202
Attention: Lawrence J. Gebhardt
Telecopier: (410) 385-5119

if to Kevin J. Kollman:

Kevin J. Kollman
154 Oak Ridge Drive
York, Pennsylvania 17402

with a copy to:

Gebhardt & Smith LLP
401 East Pratt Street, 9th Floor
Baltimore, Maryland 21202
Attention: Lawrence J. Gebhardt
Telecopier: (410) 385-5119

- (b) Any such notice or other communication shall be deemed to have been given and received on the day on which it was delivered or transmitted (or, if such day is not a business day, on the next following business day).
- (c) Any party may at any time change its address for service from time to time by giving notice to the other parties in accordance with this Section 11.3.

- 11.4 Commissions, etc.** It is understood and agreed that no broker, agent or other intermediary acted for the Vendor, the Shareholder, or the Purchaser in connection with the sale or purchase of the Purchased Shares and the Purchased Membership Rights and the Vendor and the Shareholder agree to indemnify and save harmless the Purchaser and the Purchaser agrees to indemnify and save harmless the Vendor and the Shareholder from and against any claims whatsoever for any commission or other remuneration payable or alleged to be payable to any broker, agent or other intermediary who purports to act or have acted for or on behalf of the party providing such indemnity.
- 11.5 Consultation.** The parties shall consult with each other before issuing any press release or making any other public announcement with respect to this Agreement or the transactions contemplated hereby and, except as required by any applicable law or regulatory requirement, neither the Vendor, the Shareholder nor the Purchaser shall issue any such press release or make any such public announcement without the prior written consent of the other, which consent shall not be unreasonably withheld or delayed.
- 11.6 Disclosure.** Prior to any public announcement of the transaction contemplated hereby pursuant to Section 11.5, neither party shall disclose this Agreement or any aspect of such transaction except to its board of directors, its senior management, its legal, accounting, financial or other professional advisors, any financial institution contacted by it with respect to any financing required in connection with such transaction and counsel to such institution, or as may be required by any applicable law or any regulatory authority or stock exchange having jurisdiction.

11.7 Successors and Assigns. This Agreement shall enure to the benefit of and shall be binding on and enforceable by the parties and, where the context so permits, their respective heirs, legal personal representatives, successors and permitted assigns. Except as provided in this Section 11.7, neither party may assign any of its rights or obligations hereunder without the prior written consent of the other parties. The Purchaser may, at any time prior to the Time of Closing:

- (a) assign all of its rights and obligations under this Agreement to any person if the Vendor's and the Shareholder's prior written consent is obtained and the assignee delivers to the Vendor an instrument in writing executed by the assignee confirming that it is bound by and shall perform all of the obligations of the Purchaser under this Agreement as if it were an original signatory; or
- (b) assign all of its rights and obligations hereunder to an Affiliate of the Purchaser who delivers an instrument in writing to the Vendor and the Shareholder as set out in Section 11.7(a);

provided that no such assignment shall relieve the Purchaser of its obligations under this Agreement. In the event of an assignment as set out above, any reference in this Agreement to the Purchaser shall be deemed to include the assignee. After the Time of Closing, the Purchaser may assign its rights, benefits and obligations under this Agreement to any person who purchases all or substantially all of the shares or assets of Lucas or Lucas PR without the consent of the Vendor or the Shareholder.

11.8 Amendment and Waivers. No amendment or waiver of any provision of this Agreement shall be binding on any party unless consented to in writing by such party. No waiver of any provision of this Agreement shall constitute a waiver of any other provision, nor shall any waiver constitute a continuing waiver unless otherwise expressly provided.


11.9 Counterparts. This Agreement may be executed (i) by facsimile; and (ii) in counterparts, each of which shall constitute an original and all of which taken together shall constitute one and the same instrument.

11.10 Legal Advice. The Shareholder hereby represents to the Purchaser and acknowledges and agrees that it had the opportunity to seek and was not prevented seeking independent legal advice prior to the execution and delivery of this Agreement and that, in the event the Shareholder did not avail itself of that opportunity prior to signing this Agreement, it did so voluntarily without any undue pressure and agrees that its failure to obtain independent legal advice shall not be used by it as a defence to the enforcement of its obligations under this Agreement.

[Signatures Continued On The Following Page]

IN WITNESS WHEREOF this Agreement has been executed by the parties.

CCL LABEL, INC.

By: 
Name: Steve W. Lancaster
Title: Treasurer

KOLLMAN & ASSOCIATES, LLC, a Maryland Limited Liability Company

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

LUCAS-INSERTCO PHARMACEUTICAL PRINTING COMPANY OF MARYLAND LLC, a Maryland Limited Liability Company

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO. OF PUERTO RICO, A Delaware Corporation

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

**NICHOLAS J. KOLLMAN,
the sole trustee of The Kevin J. Kollman Family Trust**

Nicholas J. Kollman

Nicholas J. Kollman

Kevin J. Kollman

IN WITNESS WHEREOF this Agreement has been executed by the parties.


CCL LABEL, INC.

By: _____

Name:

Title:


KOLLMAN & ASSOCIATES, LLC, a Maryland Limited Liability Company

By: 

Name: Nicholas J. Kollman

Title: Chairman of the Board

LUCAS-INSERTCO PHARMACEUTICAL PRINTING COMPANY OF MARYLAND LLC, a Maryland Limited Liability Company

By: 

Name: Nicholas J. Kollman

Title: Chairman of the Board

LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO. OF PUERTO RICO, A Delaware Corporation

By: 

Name: Nicholas J. Kollman

Title: Chairman of the Board

**NICHOLAS J. KOLLMAN,
the sole trustee of The Kevin J. Kollman Family Trust**



Nicholas J. Kollman



Nicholas J. Kollman

Kevin J. Kollman

IN WITNESS WHEREOF this Agreement has been executed by the parties.

CCL LABEL, INC.

By: _____
Name:
Title:

KOLLMAN & ASSOCIATES, LLC, a Maryland Limited Liability Company

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

LUCAS-INSERTCO PHARMACEUTICAL PRINTING COMPANY OF MARYLAND LLC, a Maryland Limited Liability Company

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

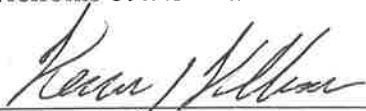
LUCAS-INSERTCO PHARMACEUTICAL PRINTING CO. OF PUERTO RICO, A Delaware Corporation

By: _____
Name: Nicholas J. Kollman
Title: Chairman of the Board

NICHOLAS J. KOLLMAN,
the sole trustee of The Kevin J. Kollman Family Trust

Nicholas J. Kollman

Nicholas J. Kollman



Kevin J. Kollman

WALL

STREET B

BUILDING S-551
EL RETIRO INDUSTRIAL PARK
SAN GERMAN P.R.

FLOOR ORIGIN

B-3

CONCRETE
SLAB w/
METAL REIN

RAMP

FENCED
TRANSFORMER
AREA

SLAB
W/ REINFORCING
BARS

CONCRETE SLAB FOUNDATION

CONCRETE
VAULTS FILLED
WITH WATER

SEWAGE
VAULT - DRY

- Sludge

OVERHEAD
POWER LINES

CONCRETE
WALL

B-2

B-4

GENERAL
ELECTRIC

SAN
GERMAN PLANT

TOTAL P.03

(63T

Environmental Science & Engineering
PROJECT NUMBER 591-5110
FIELD GROUP 20866

04/18/95 STATUS: FINAL PAGE 1
PROJECT NAME ESE/AMHERST-MENASHA CORP/PHASE 11
LAB COORDINATOR VICKIE WYNKOOP

CLIENT SAMPLE ID'S:
ESE FIELD GROUP:
ESE SEQUENCE #:
DATE COLLECTED:
TIME COLLECTED:

B-1	B-2	B-3	B-4
20866	20866	20866	20866
1	2	3	4
03/29/95	03/29/95	03/29/95	03/29/95
10:40	12:20	13:45	14:40

PARAMETERS UNITS METHOD

VOLATILE ORGANIC COMPOUNDS

Chloromethane	UG/KG-DRY	8240	<17	<15	<12	<14
Bromomethane	UG/KG-DRY	8240	<17	<15	<12	<14
Vinyl Chloride	UG/KG-DRY	8240	89	<15	<12	<14
Chloroethane	UG/KG-DRY	8240	<17	<15	<12	<14
Methylene Chloride	UG/KG-DRY	8240	12	13	<6	9
Acetone	UG/KG-DRY	8240	<17	<15	<12	<14
Carbon Disulfide	UG/KG-DRY	8240	<8	<8	<6	<7
1,1-Dichloroethene	UG/KG-DRY	8240	<8	<8	<6	<7
1,1-Dichloroethane	UG/KG-DRY	8240	<8	<8	<6	<7
trans-1,2-Dichloroethene	UG/KG-DRY	8240	35	<8	<6	<7
Chloroform	UG/KG-DRY	8240	<8	<8	<6	<7
1,2-Dichloroethane	UG/KG-DRY	8240	<8	<8	<6	<7
2-Butanone	UG/KG-DRY	8240	<17	<15	<12	<14
1,1,1-Trichloroethane	UG/KG-DRY	8240	<8	<8	<6	<7
Carbon Tetrachloride	UG/KG-DRY	8240	<8	<8	<6	<7
Vinyl Acetate	UG/KG-DRY	8240	<17	<15	<12	<14
Bromodichloromethane	UG/KG-DRY	8240	<8	<8	<6	<7
1,2-Dichloropropane	UG/KG-DRY	8240	<8	<8	<6	<7
cis-1,3-Dichloropropene	UG/KG-DRY	8240	<8	<8	<6	<7
Trichloroethene	UG/KG-DRY	8240	1400	99	<6	<7
Dibromochloromethane	UG/KG-DRY	8240	<8	<8	<6	<7
1,1,2-Trichloroethane	UG/KG-DRY	8240	<8	<8	<6	<7
Benzene	UG/KG-DRY	8240	<8	<8	<6	<7
trans-1,3-Dichloropropene	UG/KG-DRY	8240	<8	<8	<6	<7
Bromoform	UG/KG-DRY	8240	<8	<8	<6	<7
4-Methyl-2-pentanone	UG/KG-DRY	8240	<17	<15	<12	<14
2-Hexanone	UG/KG-DRY	8240	<17	<15	<12	<14
Tetrachloroethene	UG/KG-DRY	8240	<8	8	<6	<7
1,1,2,2-Tetrachloroethene	UG/KG-DRY	8240	<8	<8	<6	<7
Toluene	UG/KG-DRY	8240	<8	<8	<6	<7

A VALUE OF <7
MEANS THE LOWER
LIMIT OF DETECTION
WAS 7 PARTS PER BILLION
AND SO THIS IS BASICALLY
A "NON-DETECT."

Environmental Science & Engineering
PROJECT NUMBER 591-5110
FIELD GROUP 20866

04/18/95 STATUS: FINAL PAGE 2
PROJECT NAME ESE/AMHERST-MENASHA CORP/PHASE II
LAB COORDINATOR VICKIE WYNKOOP

CLIENT SAMPLE ID'S:
ESE FIELD GROUP:
ESE SEQUENCE #:
DATE COLLECTED:
TIME COLLECTED:

	B-1	B-2	B-3	B-4
	20866	20866	20866	20866
	1	2	3	4
	03/29/95	03/29/95	03/29/95	03/29/95
	10:40	12:20	13:45	14:40

PARAMETERS	UNITS	METHOD
------------	-------	--------

Chlorobenzene	UG/KG-DRY	8240	<8	<8	<6	<7
Ethylbenzene	UG/KG-DRY	8240	<8	<8	<6	<7
Styrene	UG/KG-DRY	8240	<8	<8	<6	<7
Xylenes (total)	UG/KG-DRY	8240	<8	<8	<6	<7
cis-1,2-Dichloroethene	UG/KG-DRY	8240	2200	110	10	16

200

TPH
===

TPH, as diesel	MG/KG-DRY	8015/MOD	<17	<15	<12	<14
TPH, as gasoline	MG/KG-DRY	8015/MOD	<17	<15	<12	<14
TPH, as jet fuel	MG/KG-DRY	8015/MOD	<17	<15	<12	<14
TPH, as unidentified hydrocarbon	MG/KG-DRY	8015/MOD	<17	<15	<12	<14

No Problem

PCBs
=====

Aroclor-1016	UG/KG-DRY	8080	<130	<120	<92	<110
Aroclor-1221	UG/KG-DRY	8080	<130	<120	<92	<110
Aroclor-1232	UG/KG-DRY	8080	<130	<120	<92	<110
Aroclor-1242	UG/KG-DRY	8080	<130	<120	<92	<110
Aroclor-1248	UG/KG-DRY	8080	<130	<120	<92	<110
Aroclor-1254	UG/KG-DRY	8080	<270	<240	<180	<220
Aroclor-1260	UG/KG-DRY	8080	<270	<240	<180	<220

No Problems

METALS
=====

THESE VALUES ARE PARTS PER MILLION

Arsenic	MG/KG-DRY	SW846	2.59	2.15	4.31	2.03	1-50
Barium	MG/KG-DRY	SW846	63.2	33.8	49.7	60.5	100-3,000
Cadmium	MG/KG-DRY	6010	<0.833	<0.762	<0.578	<0.691	-
Chromium	MG/KG-DRY	6010	2170	1720	99.2	1190	1-1000
Lead	MG/KG-DRY	6010	8.47	<7.62	7.17	<6.91	2-200
Mercury	MG/KG-DRY	7471	<0.167	0.160	<0.116	0.217	0.01-0.3
Selenium	MG/KG-DRY	7740	<0.833	<0.762	<0.578	<0.691	-
Silver	MG/KG-DRY	7740	<1.67	<1.52	<1.16	<1.38	-
Moforum	MG/KG-DRY	160.3	40.0	34.4	13.5	27.6	-

Table 1

**SUMMARY OF SOIL SAMPLE RESULTS
BUILDING S-551 - PARQUE INDUSTRIAL EL RETIRO
SAN GERMAN, PUERTO RICO**

Soil Sample No.	B-1	B-2	B-3	B-4	Maximum Contaminant Level (MCL)	Typical Concentration in Natural Soils
Parameter (Sample Interval (Fe))	0-1	1-3	3-11	11-16		
VOLATILE ORGANIC COMPOUNDS						
Micrograms per Kilogram (µg/kg)						
Vinyl Chloride	89	ND	ND	ND	2.0	
Methylene Chloride	12	13	ND	ND		
Trans-1,2-Dichloroethene	35	ND	ND	ND		
Trichloroethene	1,400	99	ND	ND	5	
Tetrachloroethene	ND	8	ND	ND	5	
Cis-1,2-Dichloroethene	2,200	110	10	16	70	
METALS						
Milligrams per Kilograms (mg/kg)						
Arsenic	2.59	2.15	4.31	2.03	50	Range: 1 - 50; Average = 5
Barium	63.2	33.8	49.7	50.5	2,000	Range: 100 - 3,000 Average = 430
Chromium	2,170	1,720	99.2	1,190	100	Range: 1 - 1,000 Average = 100
Lead	8.47	ND	7.17	ND	15	Range: 2 - 200 Average = 10
Mercury	ND	0.160	ND	0.217	2	Range: 0.01 - 0.3 Average = 0.03

ALL SAMPLES COLLECTED ON 3/29/95

ND = Non Detect

*Adapted from Hazardous Waste Land Treatment, U.S. EPA, SW-874 (April, 1983).

ENVIRONMENTAL AND POLLUTION LIABILITY ASSESSMENT

**Lucas Insertco
El Retiro Industrial Park
Carreterra 102 KM 33.2
San German, Puerto Rico**



Conducted on:
18 February 2003

Submitted to:

CCL Industries, Inc.
105 Gordon Baker Road
Willowdale, Ontario M2H 3P8

Submitted by:

AMEC Earth & Environmental, Inc.
160 Traders Blvd. E., Suite 110
Mississauga, Ontario L4Z 3K7

March 2003

AMEC Project # 3717000041

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AMEC Earth & Environmental, Inc. (AMEC) conducted an Environmental and Pollution Liability Assessment at Lucas Insertco (Lucas) in San German, Puerto Rico on 18 February 2003. AMEC performed this inspection for CCL Industries, Inc. as part of property/asset transaction due diligence, in accordance with the February 2003 AMEC Proposal for Environmental & Pollution Liability Assessment, Baltimore, MD and Puerto Rico. This assessment is based on an onsite inspection, interviews with facility personnel, review of facility records and existing documentation, and contacts with cognizant regulatory agencies. A summary of site conditions, adjacent property uses, potential contaminant sources, compliance issues, and recommendations is provided in the following table.

ASSESSMENT SUMMARY – LUCAS INSERTCO
SAN GERMAN, PUERTO RICO

ASSESSMENT AREA		FINDING
Site Assessed	Lucas Insertco	
Site Address	P.O. Box 377 Carretera 102 KM 33.2 San German, Puerto Rico 00683	
Site Assessor	Adrian Stresow, P.E., AMEC Earth & Environmental, Inc.	
Date of Site Assessment	18 February 2003	
SITE DEVELOPMENT		
Former Land Uses	Light Industrial	
Current Land Use Type	Light Industrial	
Property Owner	Puerto Rico Industrial Development Company (PRIDCO) (Government Owned Corporation)	
Date Site First Developed	Mid 1960s	
Date Current Buildings Erected	Mid 1960s	
Date Occupied by Lucas	1994	
Site Area	Approximately 36,000 square feet (ft ²)	
Number of Buildings	The Lucas facility consists of one main building, which comprises production areas, goods-in and finished goods warehousing, chemical storage, and associated operations and maintenance areas.	
Building Footprint	36,000 ft ²	
Number of Stories	One	
Total Building Area	36,000 ft ²	



**ASSESSMENT SUMMARY – LUCAS INSERTCO
SAN GERMAN, PUERTO RICO**

ASSESSMENT AREA		FINDING
Date Buildings Last Renovated		Not known or evident during site inspection.
Levels Below Grade		None
UTILITIES		
Potable Water Source		Puerto Rico Aqueduct and Sewer Authority- Autoridad de Acueductos y Alcantarillados de Puerto Rico (AAA)
Sanitary Sewer Service		Puerto Rico Aqueduct and Sewer Authority- Autoridad de Acueductos y Alcantarillados de Puerto Rico (AAA)
Natural Gas		No Natural Gas Service at the plant.
Electrical Source		Puerto Rico Electric Power Authority – Autoridad de Energia Electrica (AEE)
Transformers		Puerto Rico Electric Power Authority – Autoridad de Energia Electrica (AEE). According to AEE, no transformers at the industrial park contain polychlorinated biphenyls (PCBs).
GROUNDWATER AND SURFACE WATER		
Depth to Groundwater		Unknown
Inferred Groundwater Flow Direction		Assumed to be to the northwest, toward the Guanajibo River (Rio Guanajibo)
Groundwater Use at Site		None
Nearest Surface Water Body		Guanajibo River, located approximately 1 kilometer northwest
POTENTIAL SITE CONTAMINANT SOURCES		
Aboveground Storage Tanks (ASTs)		Two 500-gallon plastic ASTs for the temporary storage of used water-based ink
Former ASTs		None
Underground Storage Tanks (USTs)		None
Former USTs		None
Current or Former Dry Cleaners		No
Current or Former Gas Station		No
Evidence of Spills or Release		There is no evidence of spills or releases.
Type of Spill or Release		Not applicable



**ASSESSMENT SUMMARY – LUCAS INSERTCO
SAN GERMAN, PUERTO RICO**

ASSESSMENT AREA		FINDING
Known / Suspected ACMs		It was reported that the Puerto Rico Department of Health conducted a survey for asbestos-containing building materials (ACBM) and found no ACBM at the facility. A copy of the report was not available. Given the age of the facility, ACBMs may be present.
Known / Suspected Lead-Based Paints		There are no known surveys for lead-based paint (LBP) at that facility. Given the age of the Lucas Insertco buildings, LBP may be present.
Known / Suspected ODSs		None identified
Known / Suspected PCBs		None identified
Known / Suspected Radon		None identified
Known / Suspected Radioactive Materials		None identified
Known / Suspected Soil Fill		None identified
Hazardous Materials Used		Hazardous materials used and stored onsite include paints, inks, lubricating oil, alcohol, developer, and detergents used for the printing process
Hazardous Liquid Wastes Generated		Lucas has generated/discharged of the following liquid wastes during calendar year 2002: <ul style="list-style-type: none"> 900 gallons of residual inks/paints/thinners (commingled)
Solid Wastes Generated		Cardboard, plastic waste, metal waste, rejected [printed] containers, empty drums (plastic and steel), wood pallets, and general waste (rubbish).
OFF-SITE LAND USE WITHIN 400 METERS (0.25 MILE)		
Adjacent Land Use (north)		Vacant land followed by a residential subdivision
Adjacent Land Use (east)		Industrial Building owned by the PRIDCO and occupied by GE (electric controls manufacturing)
Adjacent land Use (south)		Industrial Building owned by the PRIDCO and occupied by Wallace International (utensil manufacturing)
Adjacent Land Use (west)		Vacant Industrial Building owned by the PRIDCO
Known Soil Impact		None identified
Known Groundwater Impact		None identified
Evidence of Spills or Releases		None identified
Type of Spill or Release		Not Applicable



ASSESSMENT SUMMARY – LUCAS INSERTCO
 SAN GERMAN, PUERTO RICO

ASSESSMENT AREA		FINDING
COMPLIANCE ISSUES		
Air Permits Required	An air emissions permit is not currently required.	
Wastewater Permit Required	A wastewater permit is not currently required.	
Stormwater Permit Required	A stormwater permit is not currently required.	
SUMMARY OF COMPLIANCE ISSUES		
<p><i>Potentially Significant Issues</i></p> <p><u>Air Emissions</u> No volatile emission sources were identified during our site visit.</p> <p><u>Hazardous Substance Storage / Disposal</u> No recognized environmental conditions associated with hazardous substance storage or disposal was identified.</p> <p><u>Storage Tank Management</u> There are no identified storage tank management issues.</p> <p><u>Sumps, Pits, Trenches</u> There are no identified issues regarding sumps, pits, or trenches.</p> <p><u>Stormwater</u> Stormwater discharges to drainage inlets located in the street located immediately south of the facility. No permit for stormwater is required. All stormwater issues are handled by the PRIDCO (building owner).</p> <p><u>Wastewater</u> No wastewater permits are required nor does any analytical results exist of wastewater analysis. All wastewater management issues are handled by the PRIDCO (building owner).</p> <p><u>Health and Safety Issues</u> No specific health and safety issues were identified. Plant management reported no health and/or safety complaints from employees.</p>		



ASSESSMENT SUMMARY – LUCAS INSERTCO
 SAN GERMAN, PUERTO RICO

ASSESSMENT AREA	FINDING
	<p><u>Asbestos/Lead-Based Paint, Radon</u></p> <p>According to plant management, the Department of Health conducted a survey for ACBMs, however, a copy of that report was not available.</p> <p>No LBP survey is known to have been performed for the facility.</p> <p>Based on the age of the facility, there is a potential for presence of both asbestos and LBP.</p> <p>There are no identified radon issues.</p> <p><u>PCBs</u></p> <p>There are no identified PCB issues.</p>
<i>Assessment of Potential Liability</i>	<p><u>Onsite</u></p> <p>No significant environmental liability issues were identified during the site visit.</p> <p><u>Adjacent Land Use</u></p> <p>There are no none chemical releases within 400 meters of the Lucas facility.</p>
<i>RECOMMENDATIONS</i>	
	<p>No recognized environmental conditions or potentially significant liability issues were identified and no further assessment appears warranted.</p>

AMEC Earth & Environmental, Inc. (AMEC) was retained by CCL Industries, Inc. (CCL) to conduct an Environmental and Pollution Liability Assessment at Lucas Insertco located in San German, Puerto Rico. Mr. Adrian Stresow, P.E. of AMEC visited the facility on 18 February 2003 to conduct an inspection of the site, evaluate potential on-site issues, assess facility compliance with environmental directives, and identify surrounding land use activities that could potentially impact the Lucas Insertco site.

1.1 PURPOSE

AMEC conducted this Environmental and Pollution Liability Assessment to identify the potential for environmental contamination related to past and present business practices at Lucas Insertco and to identify potential environmental liabilities associated with adjacent property uses.

1.2 SCOPE OF SERVICES

AMEC implemented the subject Environmental and Pollution Liability Assessment in accordance with the terms and conditions of the February 2003 AMEC *Proposal for Environmental & Pollution Liability Assessment, Baltimore MD and Puerto Rico*. AMEC generally performed the Assessment in accordance with American Society of Testing and Materials (ASTM) Standard Practice E 1527-00, to the extent applicable and relevant to Costa Rican business operations. Exceptions to the ASTM Standard Practice are described in Section 9 of this report.

The scope of services for the Environmental and Pollution Liability Assessment consisted of the following activities:

- Performance of interviews with facility personnel regarding current and historical operations and waste management activities.
- Completion of a site reconnaissance to evaluate current conditions and note any visual evidence of environmental concerns.
- Coordination with local regulatory authorities to obtain information on inspections, notices of violation, or potential environmental releases.
- Review of the facility's environmental records and existing facility audit/inspection reports.
- Preparation of a report summarizing Environmental and Pollution Liability Assessment findings.

1.3 SIGNIFICANT ASSUMPTIONS

All conclusions regarding the site are based on observations of existing conditions, review of available environmental agency records, and interpretation of site history and site usage data.

Borings, soil or groundwater sampling, and chemical testing have not been performed as part of this assessment.

1.4 LIMITATIONS AND EXCEPTIONS

AMEC professional services and associated findings and recommendations are provided in accordance with customary principles and practices in the field of environmental site assessments. Environmental site assessment evaluations are limited in the sense that conclusions and recommendations are developed from personal interviews and information obtained from limited research and secondary sources. Except as set forth in this report, AMEC did not independently verify the accuracy or completeness of the information provided during personal interviews or derived from secondary sources.

This report presents an overview of issues of environmental concern, reflecting best judgment using information reasonably available at the site at the time of the AMEC site visit. AMEC has prepared this report using information understood to be factual and correct and shall not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to AMEC at the time of the site visit.

1.5 USER RELIANCE

This report is intended for the use of CCL Industries Inc., in assessing the environmental condition of the site at the time of the AMEC inspection, and its use shall be limited to the terms, conditions and limitations specified in AMEC's standard terms and conditions. The scope of services performed in the execution of this assessment may not be appropriate to satisfy the needs of other users. AMEC will not be responsible for the use of this report by any other party, or reliance on or any decision based on it without the prior written consent of AMEC. AMEC accepts no responsibility for damages, if any, by any other party as a result of decisions or actions based on this report.

1.6 DEFINITIONS

Terms used throughout this ESA Report are defined as follows:

- *Adjoining Properties* - Any real property or properties, the border of which is contiguous or partially contiguous with that of the site, or that would be contiguous or partially contiguous with that of the site, but for a street, road, or other public thoroughfare separating them (per ASTM Standard Practice E 1527-00).

- *External Facilities* - All facilities, including process areas, fuel storage, materials and/or waste storage, and social, which are located outside of the primary site building. Any and all secondary structures, which are not part of the site buildings, are considered to be external facilities.

- *Groundwater Flow Direction* - Refers to the direction of shallow groundwater flow, and is based on a review of topographic maps, surface water conditions in the project area, public documents, and/or interviews with knowledgeable people on the subject.
- *Hazardous Waste* - A waste or combination of wastes which, because of its quantity, concentration, or physical, chemical or infectious characteristics may – (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed (per ASTM Standard Practice E 1527-00).
- *Internal Facilities* - All facilities, including process areas, warehouse, and administrative, which are located within the primary site building.
- *Project Area* - An approximately 400-meter (0.25-mile) radius around the site.
- *Recognized Environmental Condition* - The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (per ASTM Standard Practice E 1527-00).
- *Site* – Lucas Insertco, located in San German, Puerto Rico.

The following information was obtained during the AMEC site reconnaissance and from interviews with persons knowledgeable about the site.

2.1 SITE LOCATION

The Lucas Insertco facility (hereinafter referred to as Lucas Insertco) is located in San German, approximately 1 kilometer east of the city center (see site location map in Appendix A). Lucas Insertco is located at Carretera 102 KM 33.2, within the El Retiro Industrial Park.

2.2 GENERAL SITE DESCRIPTION

Lucas Insertco site is located in an area of mixed light industrial, and residential land uses. The Lucas Insertco property is relatively level and is located at a topographic elevation of approximately 50 meters above mean sea level (msl).

2.3 CURRENT USE OF THE PROPERTY

At the time of the AMEC assessment, Lucas Insertco used the property for contract-specified manufacturing of label printing exclusively for the pharmaceutical industry. The facility is equipped with 4 large and 2 smaller printing presses. Additionally, several label folders/cutters are used dependant upon the product produced.

Lucas Insertco currently employs approximately 85 employees and operates 24 hours per day (three shifts), 6 days per week.

2.4 DESCRIPTIONS OF ONSITE STRUCTURES, ROADS, AND OTHER IMPROVEMENTS

The Lucas Insertco facility consists of one main structure. The facility includes production areas, storage, a pre-press area, administrative offices, and flammable substance storage areas. The various areas within the Lucas Insertco facility are described below and identified in Figure 2:

Raw Material Storage Area – Lucas Insertco uses the raw material storage area for storage of new (unused) cardboard boxes, wrapping material, and paper goods. This storage area is located at the southeast corner of the facility.

Finished Goods Warehouse - Lucas Insertco uses the finished goods warehouse for storage of finished, packaged product. The finished goods warehouse is located in the northwest corner of the building.

Flammable Storage – There is no flammable chemical storage building located at the facility. Small flammable cabinets (Photograph 1) are used at the various printing press areas for small container storage of alcohol, thinners, degreasers and paints.

Pre-press Area – The pre-press area is utilized for the design and preparation (development) of print layout boards/screens.



PHOTO 1: Flammable chemical storage cabinet located within printing press areas.

Sludge Waste Accumulation Area – Located adjacent to the west of the cafeteria, the waste accumulation area is used for temporary storage of paint sludge and waste paint liquids. Lucas Insertco temporarily stores this type of waste in this area prior to removal by disposal contractors (Photograph 2).



PHOTO 2: Paint sludge and waste paint liquid storage vessels located west of cafeteria.

Current utility providers for the Lucas Insertco site are identified in Table 1.

Table 1
Current Utility Providers
Lucas Insertco, San German, Puerto Rico

Utility / Service	Service Provider
Water (potable) and Wastewater	Puerto Rico Aqueduct and Sewer Authority- (Autoridad de Acueductos y Alcantarillados de Puerto Rico [AAA]) Zona Industrial El Convento Carretera 362 #4 Suite 101 San German, Puerto Rico 00638 Telephone: 787-264-0740

Table 1
Current Utility Providers
Lucas Insertco, San German, Puerto Rico

Utility / Service	Service Provider
Electric	Puerto Rico Electric Power Authority (Autoridad de Energia Electrica Estado Libres Asociado de Puerto Rico) Calle Luna Apartado 62 San German, PR 00683 Telephone: 787-289-3434
Propane (No natural gas at site)	Progasco Avenue Ponce De Leon 1225, Ste. 1105 San Juan, Puerto Rico 00907 Telephone: 787-782-0140
Solid Waste Disposal	BFI Waste Systems Ponce, Puerto Rico Telephone: 787-788-7171

2.5 CURRENT USES OF ADJOINING PROPERTIES

Based on a visual reconnaissance of the properties adjoining the site, the properties that adjoin the Lucas Insertco site are identified in Table 2.

Table 2
Properties Adjoining
Lucas Insertco, San José

Direction from the Site	Adjoining Property/Roadway
North	Vacant land followed by a residential subdivision.
East	Industrial Building owned by the PRIDCO and occupied by GE (electric controls manufacturing).
South	Industrial Building owned by the PRIDCO and occupied by Wallace International (utensil manufacturing).
West	Vacant Industrial Building owned by the PRIDCO.

AMEC viewed the adjoining properties from public roadways for evidence of significant chemical storage, improper waste disposal, or other outward indications of adverse environmental conditions. No visual evidence of improper waste disposal or other visual indication of adverse environmental conditions was observed.



SECTION 3 USER PROVIDED INFORMATION

The following information was obtained during the AMEC site reconnaissance and from interviews with people knowledgeable about the site.

3.1 TITLE RECORDS

The Puerto Rico Industrial Development Company (PRIDCO) maintains all property title information for the Lucas Insertco facility.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

Lucas Insertco personnel are not aware of environmental liens or activity/use limitations for the subject property.

3.3 SPECIALIZED KNOWLEDGE

Lucas Insertco has not disclosed any information on any environmental issues encumbering the property or any specialized knowledge or experience that would provide important information regarding previous ownership or uses of the property that may be material to identifying recognized environmental conditions.

3.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

AMEC has not been provided any information regarding a valuation reduction of the Lucas Insertco property due in whole or in part to environmental conditions associated with the property.

3.5 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The property owner is PRIDCO.

3.6 REASONS FOR PERFORMING ENVIRONMENTAL AND POLLUTION LIABILITY ASSESSMENT

AMEC has performed this Assessment at the request of CCL Industries, Inc. to identify current operating practices that may lead to future liability or environmental pollution incidents.

Records provided by Lucas Insertco and obtained by AMEC during subsequent reviews are documented below. Copies of selected documents are provided in Appendix B.

Table 3
Documents Reviewed
Lucas Insertco, San José

Document Title / Description	Document Date	Provided / Obtained By
Analytical data for Paint Sludge	May 15, 2001	Lucas Insertco
Department of Health License	30 September 2002 (expires 30 September 2003)	Lucas Insertco
Material Safety Data Sheets for various paints/inks, cleaners, developer and lubricating oil used by Lucas Insertco	Various	Lucas Insertco and AMEC
Waste Disposal Record #88410 Fluorescent Lamps	4 April 2002	Lucas Insertco
Waste Disposal Record # 81666 Ink Sludge	12 December 2002	Lucas Insertco

4.1 HISTORICAL USE INFORMATION ON THE PROPERTY

Research on site historical information was limited to interviews with on-site personnel, who indicate that the property was undeveloped prior to construction of the current structure in the early 1960s. No known major renovations to the Lucas Insertco building are known.

4.2 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Property adjoining the Lucas Insertco facility consists of mixed residential and commercial uses. Property to the north is developed as residential housing. Land south of the facility is occupied by Wallace International, a utensil manufacturer. The land to the north is currently vacant, followed by a residential subdivision across Carretera 102. Land west of the facility is occupied by a vacant industrial building and land to the east is occupied by a GE controls assembly facility.

This section provides a summary of reconnaissance methodology, site setting, and general observations regarding the facility interior and exterior as they relate to recognized environmental conditions associated with known property uses.

5.1 METHODOLOGY

AMEC gathered all site reconnaissance information during a 18 February 2003 visit to the Lucas Insertco facility. The AMEC assessor conducted an initial interview with the Lucas Insertco General Manager (Mr. Luis D. Perez). The AMEC assessor conducted a detailed facility inspection, accompanied by Mr. Perez. Mr. Perez responded to follow-up questions and provided copies of requested documentation.

After the site reconnaissance, AMEC reviewed applicable environmental regulations and conducted telephone interviews with agency personnel to obtain clarification on local requirements.

5.2 GENERAL SITE SETTING

The Lucas Insertco site is located about 1 kilometer east of the center of San German at a topographic elevation of approximately 50 meters above sea level. The surface topography of the Lucas Insertco site itself is generally level, although the overall land slope is to toward the southwest.

5.2.1 General Site Geology

The underlying geology of the San German area consists of volcanic and sedimentary rocks of Tertiary and Cretaceous age. The Tertiary sedimentary rocks consist of the Juana Diaz Formation of Oligocene and Miocene age, which overlies the volcanic and sedimentary rocks, and the Juana Diaz Formation of Miocene and Pliocene age, which overlies the Juana Diaz Formation. The Juana Diaz Formation and Ponce Limestone are in fault contact with older volcanic and sedimentary rocks in places. The volcanic and sedimentary rocks consist of massive to thick bedded andesitic tuff, welded tuff, porphyritic basalt, volcanic breccia, sandstone, and siltstone. The Juana Diaz Formation consists of thin-bedded sandy to shaly, fossiliferous limestone interbedded with marl, shale, and conglomerate. The Ponce Limestone unconformably overlies the Juana Diaz Formation and consists of a shallow-marine, fossiliferous limestone that grades to clastic facies in subsurface areas. Total thickness of the formation is uncertain but may exceed 1,000 feet.

5.2.2 General Site Hydrology

Puerto Rico has abundant groundwater and surface water resources due to relatively heavy rainfall over the mountainous interior of the island and receptive, sedimentary rocks around the island's periphery. These alluvial and limestone formations form an extensive artesian aquifer system on the north coast. Water-table aquifers overlie the north coast artesian aquifer and occur at shallow depths along most of Puerto Rico's coastline. Man-made reservoirs located on principal water courses collect runoff and are used for water supply, flood control, and limited hydroelectric power generation. Ground water accounts for about 30 percent of the total amount of water used in Puerto Rico, whereas surface water accounts for about 70 percent.

Based on site topography in the area, groundwater flow is assumed to be to the north, towards the Rio Guanajibo. Localized groundwater flow patterns may vary due to the presence of underground utilities, heterogeneous subsurface conditions, and/or local recharge factors. Therefore, without site-specific or localized hydrogeologic information, any material release of a hazardous substance or petroleum product into the natural environment on an adjacent property or in the Project Area should be considered a potential environmental risk to the site through contaminant migration via advection and dispersion within the localized groundwater flow system.

5.3 EXTERIOR OBSERVATIONS

5.3.1 Pits, Ponds, or Lagoons

No waste disposal pits, ponds, or lagoons were identified during the Lucas Insertco reconnaissance or from interviews or records reviews. In addition, no waste disposal pits, ponds, or lagoons were identifiable during the visual observations of adjoining properties.

5.3.2 Stained Soil or Pavement

No significant areas of visibly stained soil and pavement were identified during the Lucas Insertco reconnaissance.

5.3.3 Stressed Vegetation

There is no evidence of stressed vegetation at the Lucas Insertco facility, as there is only a small portion of unpaved surface within the property fence line.

5.3.4 Solid Waste Disposal Areas

Current land use does not suggest the presence of any land-based solid waste disposal activities in the vicinity.

5.3.5 Wastewater and Stormwater

Lucas Insertco discharges wastewater (there are no specific process wastewater flows) to the sanitary sewer system. A permit has not been required of the facility. There are no mechanical controls (in the form of valves or diversions) on the discharge of wastewater from the Lucas Insertco site.

Stormwater runoff from roofs and paved exterior surfaces flows as sheet flow to storm drains located in Calle B along the facility's southern property margin. In addition, a concrete lined storm water drainage ditch (Photograph 3) is located just outside the subject property's western margin. According to Lucas Insertco personnel, they are not required to have a storm water discharge permit, as the PRIDCO handles all storm water and industrial park infrastructure issues. There are no controls on stormwater discharge from the site: Lucas Insertco does not retain, test, or treat stormwater prior to discharge.



PHOTO 3: Storm water drainage ditch outside west property boundary.

Potable water is supplied by AAA, which reportedly uses a combination of surface water and ground water resources. Based on the reconnaissance, interviews, and document reviews conducted as part of this assessment, there are no indications of any on-site water supply wells. In addition, there is no evidence of dry wells, irrigation wells, injection wells, or abandoned wells at the Lucas Insertco site.

5.3.7 Septic Systems

Lucas Insertco discharges wastewater to the sanitary sewer system and associated AAA treatment plant. Lucas Insertco facility drawings indicate the presence of three septic systems onsite. No evidence of septic systems was identified at the facility during our reconnaissance.

5.3.8 Storage Tanks

Lucas Insertco has two 500-gallon aboveground tanks containing waste ink and paint liquid sludge. The tanks are pumped on an as-needed basis by BFI Waste Systems. Lucas Insertco does not use any tanks for bulk liquid chemical storage.

5.3.9 Odors

There are no readily detectible chemical odors outside the Lucas Insertco facility.

5.3.10 Pools of Liquid

No standing pools of liquid were observed outside the Lucas Insertco facility.

5.3.11 Drums and Other Containers

Lucas Insertco stores containers of hazardous materials in a covered area along the east side of the main structure (Photograph 4). Containers used for storage of liquids include 55-gallon steel and plastic drums of lubricating oil, detergent and inks. Containers are stored on secondary containment pallets within a concrete bermed secondary containment storage area.

5.3.12 PCBs

There is no identified PCB-containing equipment at the Lucas Insertco facility. The Puerto Rico Electric Power Authority (AEE) owns and maintains a substation located approximately 1 kilometer west of the Lucas Insertco facility. According to AEE, no PCB containing transformers are known for the industrial park. There is no evidence of staining or releases of transformer dielectric fluid.

5.4 INTERIOR OBSERVATIONS

5.4.1 Heating/Cooling

The Lucas Insertco facility maintains a cooling system which was reported to only be operated periodically during the work day (primarily for ventilation within the production area). The refrigeration units were reported to be serviced by an outside vendor. No additional details were available from Lucas Insertco staff.

5.4.2 Stains or Corrosion

There was no evidence of significant staining or corrosion inside the Lucas Insertco facility.

5.4.3 Drains and Sumps

No floor drains were noted within the Lucas Insertco facility.

5.4.4 Storage Tanks

The Lucas Insertco facility does not have any interior storage tanks.

5.4.5 Odors

A mild ink odor was noted in the production area. Plant personnel reported that no complaints regarding odors at the facility have been made.

5.4.6 Pools of Liquid

No standing pools of liquid were observed inside the Lucas Insertco facility.

5.4.7 Drums and Other Containers

At the time of this assessment, it is estimated that Lucas Insertco had no more than 30 containers of chemical substances in storage. Interior storage locations for these materials include the flammable substance cabinets at the various presses and outside the pre-process area (cabinets with the various colors of ink). Containers used for storage of hazardous liquids include 1 to 10-gallon plastic containers, and plastic and metal containers ranging in size from 8-ounces to 32-ounces.

5.4.8 Unidentified Substance Containers

During the on-site reconnaissance, there were no observed incidents of unlabeled containers.

5.4.9 Polychlorinated Biphenyls (PCBs)

Lucas Insertco does not have electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs (other than fluorescent light ballasts).

This section identifies the persons contacted to obtain information during the assessment of Lucas Insertco.

6.1 INTERVIEWS WITH OWNER

The building owner is the Puerto Rico Industrial Development Company (PRIDCO) and is leased by Lucas Insertco. All interviews were conducted with personnel at the Lucas Insertco facility in San German.

6.2 INTERVIEWS WITH SITE MANAGER AND KEY PERSONNEL

AMEC performed the initial interview and exit briefing with the Lucas Insertco Plant Operations Manager, Mr. Luis D. Perez.

Mr. Perez provided tours of the facility and provided copies of relevant documentation including facility diagrams, information on waste generation and disposal practices, the facility operations, and material safety data sheets.

6.3 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

AMEC contacted PRIDCO and the Puerto Rico Aqueduct and Sewer Authority to obtain clarification on wastewater monitoring requirements (Telephone: 787-832-4356). AMEC also contacted the Department of Environment and Natural Resources (Departamento de Recursos Naturales y Ambientales) to obtain information on hazardous waste disposal manifest requirements and environmental impact data in the area of the Lucas Insertco facility (Telephone: 787-833-3700).

This section provides a summary of information obtained during the physical reconnaissance, interviews with site representatives, and review of applicable environmental regulations.

7.1 ENVIRONMENTAL SITE ASSESSMENT

7.1.1 FEDERAL AND STATE RECORD REVIEW

AMEC reviewed a zip code search of Federal and State environmental record databases conducted by EDR (radial searches not available in Puerto Rico) to identify listings at the subject site and at facilities located in proximity to the subject site. Databases searched are shown in Table 3. A copy of the database is presented in Appendix C.

TABLE 4

RECORD DATABASES SEARCHED

A. Federal Environmental Protection Agency (EPA) Record			
1. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act			
NPL	National Priorities List	Uncontrolled or abandoned hazardous waste sites identified for priority remedial action under the Superfund program.	CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System List
CERCLIS		Compilation of sites EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the CERCLA, or the Superfund Act. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation, and ultimately placed on the NPL. Sites that have been delisted will be marked No Further Remedial Action Planned (NFRAP).	
CERC-NFRAP	No Further Remedial Action Planned	CERCLA sites that have been delisted will be marked No Further Remedial Action Planned (NFRAP).	

TABLE 4 (CONTINUED)

TABLE 4 (CONTINUED)			
2. RCRA: Resource Conservation and Recovery Act			
RCRIS (Resource Conservation and Recovery Information System)	Treatment, Storage, and Disposal (TSD) Facilities	Information on facilities which treat, store, or dispose of EPA-regulated hazardous waste.	
		Information on facilities a) generating more than 1000 kg of EPA-regulated hazardous waste per month, or b) meeting other applicable RCRA requirements.	
	Large Quantity Generators	Information on facilities a) generating between 100 kg and 1000 kg of EPA-regulated hazardous waste per month, or b) meeting other applicable RCRA requirements.	
	Small Quantity Generators	Information on facilities a) generating between 100 kg and 1000 kg of EPA-regulated hazardous waste per month, or b) meeting other applicable RCRA requirements.	
CORRACTS	Corrective Action Report	The CORRACTS database is maintained by the EPA and identifies hazardous waste handlers which have corrective action activity pursuant to RCRA.	
3. Supplemental Federal Database			
ROD	Records of Decision	The ROD database provides a list of Records of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site and contain technical and health information to aid in the clean-up.	
B. Puerto Rico State Files			
UST/LUST	Underground Storage Tank/Leaking Underground Storage Tank List	Registered active and inactive storage tanks or leaking active storage tanks maintained by the Rhode Island Department of Environmental Management (RIDEM).	

The regulatory database review revealed the following:

- The subject site, referenced as PR Industrial Development Co., is listed in the RCRIS database. The facility is listed as a conditionally exempt small quantity generator. No process, company or SIC code is listed for the facility.
- Wallace International of Puerto Rico, adjacent the south of the site, is listed in the UST database as having "closure" reported for its tank status. No additional information was available regarding the apparent former UST at this facility. In addition, this facility is listed

- in the Toxic Chemical Release Inventory System (TRIS), however, no violations are known reported for the facility.
- Texaco PR Inc, San German SS, located at RD 102 KM 33.6, near the subject site, is listed in the RCRIIS database as a conditionally exempt small quantity generator. No violations were reported for the facility. In addition, no information regarding the operation of the USTs at this facility was reported.
 - Caribe G.E. Dist. Components, locate adjacent to the east of the Lucas Insertco facility was reported in the EPA FINDS database. No violations were identified for the G.E. facility.

7.1.2 Air Emissions

Lucas Insertco does not have a specific air emissions permit and does not monitor air emissions prior to release, as neither is currently required.

7.1.3 Hazardous Material Use and Storage

All hazardous material identified at the facility appeared to be properly used and stored. No observation of the misuse of hazardous material was noted during the reconnaissance.

7.1.4 Hazardous Waste Storage / Disposal

Lucas Insertco stores hazardous wastes in an exterior storage area (at the east side of the facility. Non-hazardous waste paint liquid and ink sludge are temporarily stored in two 500-gallon tanks located at the rear of the facility, west of the cafeteria. No areas of significant staining were noted within the storage areas.

7.1.5 Storage Tank Management

Lucas Insertco does not use any tanks for bulk liquid chemical storage. There are no identified storage tank management issues.

7.1.6 Sumps, Pits, Trenches

There are no identified sumps, pits or trench issues at the site.

7.1.7 Storm water

All storm water from the Lucas Insertco site now discharges as sheet flow to open gutters/drainage inlets in the street located immediately south (Calle B) of the Lucas Insertco facility. No issues identified with storm water were identified during the reconnaissance.

7.1.8 Wastewater

Lucas Insertco does not generate specific wastewater flows at the subject facility. All wastewaters (primarily sanitary flow) are discharged to the municipal sanitary system. No permit is required for the facility and no issues associated with wastewater were identified during the site reconnaissance.

7.1.9 Health and Safety Issues

No health and/or safety issues were observed during our site visit. Plant management did not report any complaints or safety issues from employees at the Lucas Insertco facility.

7.1.10 Asbestos, Lead-Based Paint, and Radon

Lucas Insertco personnel are not aware of any asbestos or lead-based paint (LBP) surveys conducted internally. Plant management reported that the Department of Health conducted an inspection related to LBP and asbestos in the past. AMEC and plant management was unsuccessful in identifying the appropriate agency which may have conducted the surveys. Both asbestos-containing building materials (ACBM) and lead-based paint formulations have been banned in Puerto Rico since the 1980s. Based on the age of the original Lucas Insertco facility (estimated to be early 1960s), ACBM and lead-based paints may be present.

1. LBP and asbestos surveys have not been performed. Based on the age of the Lucas Insertco facility, there is a potential for presence of both ACBM and LBP. Radon Insertco personnel are not aware of any radon gas surveys conducted to date. Radon gas is produced where soils and rocks contain uranium. In buildings with high air circulation, radon is not considered a health problem. However, in confined spaces radon can concentrate and become a health hazard. Given the facility design, the potential for accumulation of radon gas is likely to be low.

7.1.11 PCBs

There is no known or suspected (other than light ballasts) PCB-containing equipment at the facility.

7.2 POLLUTION LIABILITY ASSESSMENT - ADJACENT LAND USE

AMEC reviewed the current land uses of neighboring properties to assess any potential environmental impacts to the site that may arise from off-site operations. The inferred groundwater flow direction is to the north; therefore, downgradient land use within 400 meters (0.25 miles) of the Lucas Insertco Facility was noted. The adjacent to the south facility consists of the Wallace International utensil manufacturing facility.

AMEC observed no obvious environmental issues on the downgradient properties. Based on observations of these surrounding properties from publicly accessible locations and the inferred groundwater gradient, it is AMEC's opinion that there are no apparent significant environmental issues at the site associated with surrounding land use activities.

Based on the Phase I ESA, it is AMEC's opinion that there are no unrecognized environmental conditions in connection with the site, as defined in ASTM Standard Practice E 1527-00.

The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions*. (ASTM E 1527-00, Section 1.1.1)

To address potential regulatory and operational issues, AMEC offers the recommendations identified in Table 4.

Table 5
Recommendations for Compliance-Related Findings
Lucas Insertco, San German

Finding	Recommendation for Corrective Action	Regulation or Permit Provision
1	Implement asbestos surveys to document the status of building materials throughout the facility, and implement a LBP survey to inventory the status of painted surfaces and ensure compliance with current asbestos and lead-based paint restrictions.	EPA Asbestos Rules

SECTION 9 DEVIATIONS

AMEC generally performed this Assessment in accordance with American Society of Testing and Materials (ASTM) Standard Practice E 1527-00, to the extent applicable and relevant to European business operations. The ASTM standard is intended to constitute appropriate inquiry to establish innocent landowner status under CERCLA, a provision that is not applicable to Costa Rican business ventures. Nevertheless, AMEC conformed to the basic tenets of the ASTM practice by conducting an inquiry designed to identify recognized environmental conditions in accordance with commercially prudent and reasonable inquiry.

The following ASTM Environmental Assessment components were not included in the AMEC assessment of Lucas Insertco.

- Detailed historical research — ASTM guidelines call for identification of all obvious property uses from the first developed use, or 1940, whichever is earlier. To a great degree, "standard" historical resources (aerial photographs, fire insurance maps, property tax files, local street directories, and building department records, etc.) are not readily available for Puerto Rican commercial properties. As a result, historical research is limited to the information gleaned during interviews of facility personnel.
- Chain of title search — ASTM requires examination of property title documents to identify any charge, security, or encumbrance upon the property title to secure the payment of a cost, damage, debt, obligation, or duty arising from cleanup or other environmental response actions associated with hazardous substances or petroleum products upon a property. This effort was explicitly excluded from the scope of services for the Lucas Insertco facility (per the February AMEC Proposal for Environmental & Pollution Liability Assessment, Baltimore, MD, and Puerto Rico).
- Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions — The ASTM standard indicates that geologic, hydrogeologic, hydrologic, and topographic information should be obtained to evaluate whether hazardous substances or petroleum products are likely to migrate to the property, or within or from the property, into ground water or soil. Site-specific information on geology, hydrogeology, and conditions of the Lucas Insertco site and adjacent properties was not readily accessible and thus no conclusions could be made regarding these factors.

The following agencies, offices, reports, and publications were used as information sources in the preparation of this report.

Analytical data for Paint Sludge (Ignitability, Corrosivity, Reactivity, TCLP Metals, Volatiles, Semi-Volatiles and Pesticides). 15 May 2001
Department of Health, Sanitary License, issued to Lucas Insertco 30 September 2002 (*expires 30 September 2003*)

Environmental Data Resources, Inc., Regulatory Database Report, Lucas Insertco, Carretera 102 Km 33.2, San German, Puerto Rico, February 25, 2003.

Material Safety Data Sheets for various paints, oils, cleaners used by Lucas Insertco.

United State Geological Survey, Topographic Map, 7.5 Minute Quadrangle, San German, Puerto Rico, 1966, 1952 and 1957.

Waste Disposal Record, Non-Hazardous Waste Manifest No. 81666, Sludge Ink, 900 Gallons, 15 December 2002.

Waste Disposal Record, Non-Hazardous Waste Manifest No. 88410, Lamp Fluorescent, 17 April 2002.

SECTION 10 REFERENCES



**SECTION 11
SIGNATURE OF ENVIRONMENTAL PROFESSIONAL**

The following professional conducted the Environmental and Pollution Liability Assessment at Lucas Insertco, and prepared this report.

A handwritten signature in blue ink, appearing to read "Adrian Stresow", written over a horizontal line.

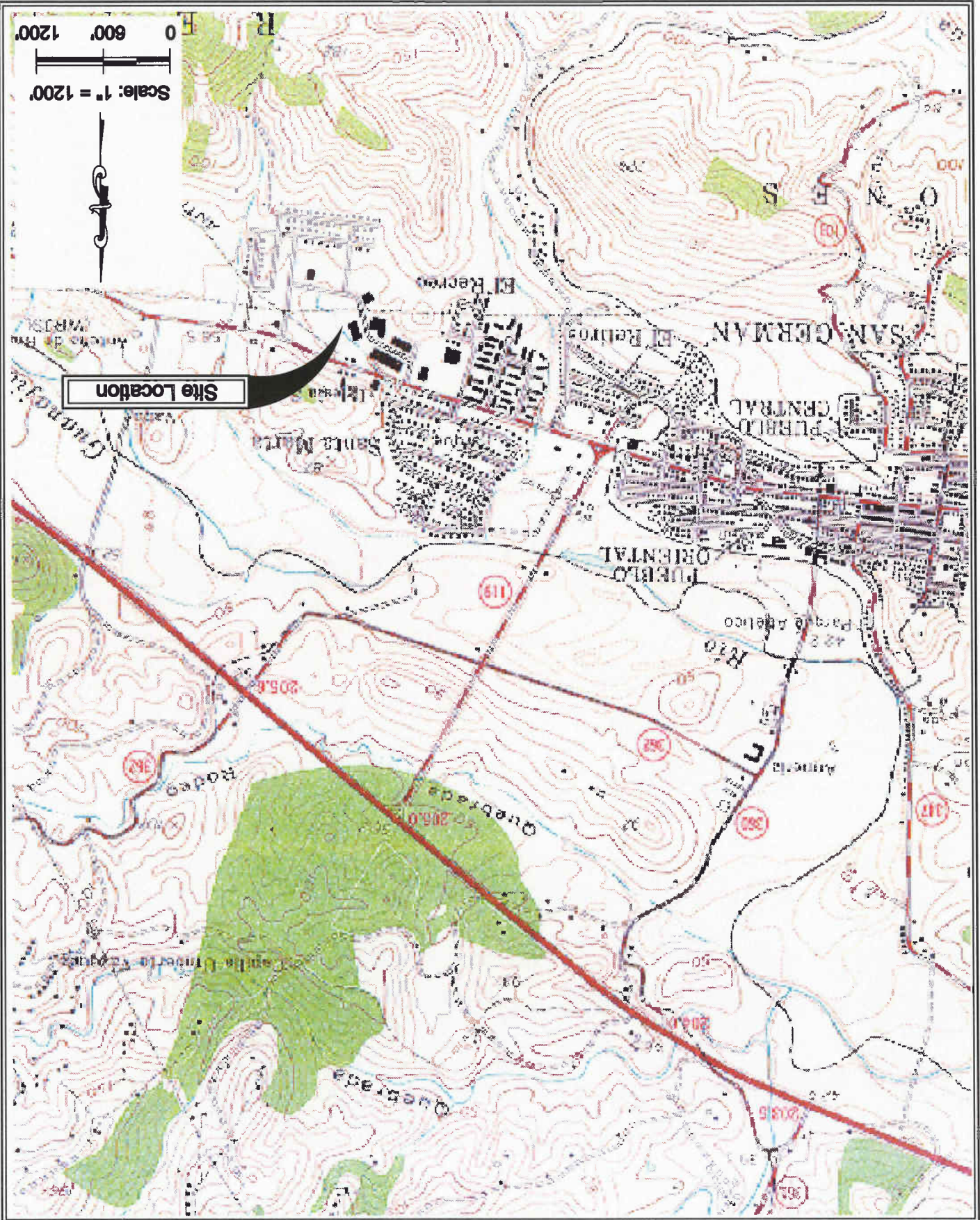
Adrian K. Stresow, P.E.
AMEC Earth & Environmental

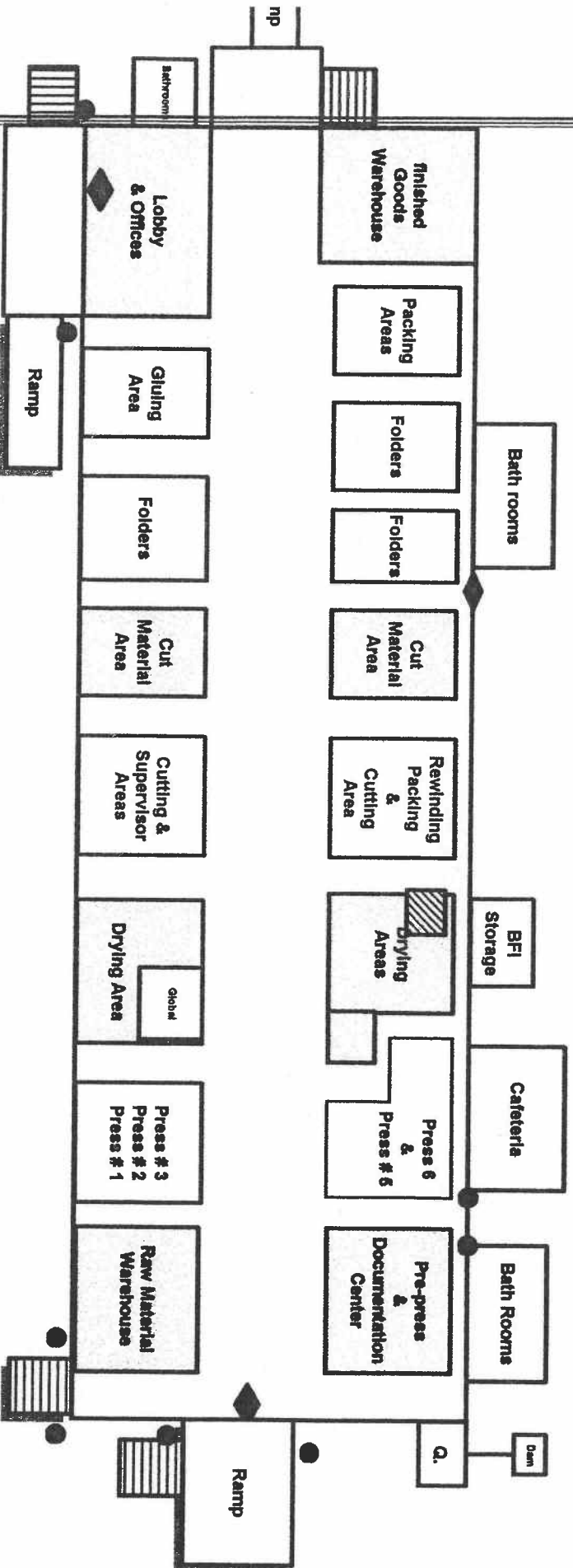
APPENDIX A
LUCAS INSERTCO
SITE LOCATION AND FACILITY MAP

Environmental and Pollution Liability Assessment
Lucas Inserico
San German, Puerto Rico
AMEC Project No. 3-717-000041

1966 USG

amtec Earth & Environmental



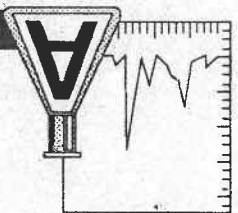


Lucas Insertco

APPENDIX B
LUCAS INSERTCO
SELECT DOCUMENTS PROVIDED FOR REVIEW



ALTOI CHEMICAL ENVIRONMENTAL LABORATORY
LCHEM LABORATORY, INC.



May 15, 2001

LUCAS INSERTCO
P O Box 377
SAN GERMAN PUERTO RICO 00683

ANALYSIS REPORT

Sample Identification

Sample from LUCAS INSERTCO
Identified as "Desperdicios de tintas"
May 4, 2001
Custody Number 08990
Lab Sample No. 01-1975

**MAXIMUM CONCENTRATION OF CONTAMINANTS
FOR CHARACTERISTICS OF TCLP TOXICITY**

EPA HAZARDOUS Waste Number	Contaminant	Results (PPM)	Detection Limit (PPM)	Regulatory Level
Metals SW6000/7000				
D004	Arsenic	<0.01	0.01	5.0
D005	Barium	<0.20	0.20	100.0
D006	Cadmium	<0.005	0.005	1.0
D007	Chromium	<0.05	0.05	5.0
D008	Lead	<0.05	0.05	5.0
D009	Mercury	<0.002	0.002	0.2
D010	Selenium	<0.01	0.01	1.0
D011	Silver	<0.01	0.01	5.0



Sample Identification

Sample from LUCAS INSERTCO
Identified as "Desperdicios de tintas"
May 4, 2001
Custody Number 08990
Lab Sample No. 01-1975

HAZARDOUS CHARACTERISTICS

IGNITABILITY: HAZARDOUS WASTES NUMBER D 001

Sample does not exhibit the characteristics of ignitability according to the U.S. Environmental Protection Agency, Manual SW-846, "Test Methods for Evaluating Solid Wastes."

Flash Point, >140°F

CORROSIVITY: HAZARDOUS WASTES NUMBER D 002

Sample does not exhibit the characteristics of corrosivity according to the U.S. Environmental Protection Agency, Manual SW-846, "Test Methods for Evaluating Solid Wastes."

Corrosion Rate <6.35 mm/yr

REACTIVITY: HAZARDOUS WASTES NUMBER D 003

Sample does not exhibit the characteristics of reactivity according to the U.S. Environmental Protection Agency, Manual SW-846, "Test Methods for Evaluating Solid Wastes."

Sulfide <10 PPM
Cyanide <10 PPM



ANALYSIS REPORT

ALCHEM LABORATORY, INC.

ALTOI CHEMICAL ENVIRONMENTAL LABORATORY

SABANETAS INDUSTRIAL PARK • PONCE • P. O. BOX 359 • MERCEDITA, PR 00715

Sample Identification

Sample from LUCAS INSERTCO
 Identified as "Desperdicios de tintas"
 May 4, 2001
 Custody Number 08990
 Lab Sample No. 01-1975

MAXIMUM CONCENTRATION OF CONTAMINANTS
 FOR CHARACTERISTICS OF TCLP TOXICITY

ANALYSIS REPORT

EPA HAZARDOUS Waste Number	Contaminant	Results (mg/L)	Detection Limit (mg/L)	Regulatory Level
D018	Benzene	ND	0.01	0.5
D019	Carbon tetrachloride	ND	0.01	0.5
D021	Chlorobenzene	ND	0.01	100.0
D022	Chloroform	ND	0.01	6.0
D 027	1,4-Dichlorobenzene	ND	0.01	7.5
D028	1,2-Dichloroethane	ND	0.01	0.5
D029	1,1-Dichloroethylene	ND	0.01	0.7
D035	Methyl ethyl ketone	ND	0.5	200.0
D039	Tetrachloroethylene	ND	0.02	0.7
D040	Trichloroethylene	ND	0.01	0.5
D043	Vinyl chloride	ND	0.01	0.2
VOLATILES				

ND = NOT DETECTED.



ANALYSIS REPORT

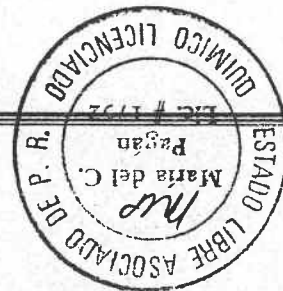
Sample Identification

Sample from LUCAS INSERTCO
Identified as "Desperdicios de tintas"
May 4, 2001
Custody Number 08990
Lab Sample No. 01-1975

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR CHARACTERISTICS OF TCLP TOXICITY

EPA HAZARDOUS Waste Number	Contaminant	Results (PPM)	Detection Limit (PPM)	Regulatory Level
Semi-volatiles SW 8270				
D023	o-Cresol	ND	0.0008	200
D024	m-Cresol	ND	0.0007	200
D025	p-Cresol	ND	0.0006	200
D030	2,4-Dinitrotoluene	ND	0.00006	0.13
D032	Hexachlorobenzene	ND	0.00009	0.13
D033	Hexachlorobutadiene	ND	0.00009	0.5
D034	Hexachloroethane	ND	0.0003	3.0
D036	Nitrobenzene	ND	0.00008	2.0
D037	Pentachlorophenol	ND	0.00007	100.0
D038	Pyridine	ND	0.0002	5.0
D041	2,4,5-Trichlorophenol	ND	0.0008	400.00
D042	2,4,6-Trichlorophenol	ND	0.00009	2.0

If O-, m- and p-Cresol concentration can not be differentiated the total Cresol (D-025) concentration is used. The regulatory level of total Cresol is 200.0 mg/L.



SABANETAS INDUSTRIAL PARK • PONCE • P. O. BOX 359 • MERCEDITA, PR 00715

ALCHEM LABORATORY, INC.
ALTOL CHEMICAL ENVIRONMENTAL LABORATORY

ANALYSIS REPORT

Sample Identification

Sample from LUCAS INSERTCO
Identified as "Desperdicios de tintas"
May 4, 2001
Custody Number 08990
Lab Sample No. 01-1975

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR CHARACTERISTICS OF TCLP TOXICITY

EPA HAZARDOUS Waste Number	Contaminant	Results (mg/L)	Detection Limit (mg/L)	Regulatory Level
D020	Chlordane	ND	0.005	0.03
D012	Endrin	ND	0.00025	0.02
D031	Hepachlor (and its OH)	ND	0.00025	0.008
D013	Lindane	ND	0.00025	0.4
D014	Methoxychlor	ND	0.00025	10.0
D015	Toxaphene	ND	0.01	0.5
HERBICIDES SW 8150				
D016	2,4-D	ND	0.0005	10.0
D 017	2,4,5-TP Silvex	ND	0.0005	1.0

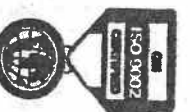




ALCHEM LABORATORY, INC.

ALCHEM LABORATORY, INC.

SABANETAS INDUSTRIAL PARK • PONCE, PR
P. O. BOX 59 • MERCEDITA, PR 00715
TEL. (787) 848-6050 FAX: (787) 848-6299



CUSTODY # 08990

Customer Name:

Lucas Interiors

Project:

San German

Sample Type (No. of Cont.) 3 Grab 0 Composite Turnaround Time

Preservation: ☒ Ice ☐ H₂SO₄ ☐ HNO₃ ☐ NaOH ☐ Others

Sample Matrix: ☒ Liquid ☐ Solid ☐ Sludge ☒ Oil ☐ Air

Containers: ☐ Sterile ☐ Plastic ☒ Glass ☐ Vials ☐ Others

Sample No.	Date	Time	Sample Description
------------	------	------	--------------------

1995	5-4-01	10:00	Desperdicios de Pintas
------	--------	-------	------------------------

Acidity	Residual Chlorine	Sulfite	Gold	Zinc
Alkalinity	Hardness	Surfactant	Iron	Ignitability
Ammonia	Iodide	TKN	Lead	Corrosivity
Asbestos	Moisture	TOC	Manganese	Reactivity
Bicarbonate	Nitrate	Turbidity	Manganese	Metals
BOD-5	Nitrite	Aluminum	Mercury	Volatiles
Bromide	Nitrate & Nitrite	Antimony	Molybdenum	Volatiles
Carbonate	Oil & Grease	Arsenic	Nickel	Pesticides
Chloride	Ortho Phosphate	Barium	Potassium	Herbicides
COD	Phenol	Beryllium	Selenium	Benzene
Coliform (Fecal/Total)	Phosphorous Total	Bismuth	Silicon	BTEX
Color (ADM, Pt-Co)	Sett. Solid (Mg/L, ML/L)	Boron	Silver	PCBs
Conductivity	Solids Total	Cadmium	Sodium	TPH
Cyanide	Suspended Solid (TSS)	Calcium	Strontium	TOX
Fluoride	Silica	Chromium	Thallium	TTO
pH	Dissolved Solids (TDS)	Chromium VI	Tin	Dioxin
Temperature	Sulfate	Cobalt	Titanium	Others
Dissolved Oxygen	Sulfide	Copper	Vanadium	

Comments:

Sample collected by: (Signature)

Lucas Interiors

Date:

04 May-2001

Time:

10:10

Delivered to Lab. by: (Signature)

Signature

Date:

04 May-2001

Time:

13:20

Customer Signature

Signature

Date:

Signature

Time:

Signature

Received at Lab. by: (Signature)

Signature

Date:

5/4/01

Time:

13:20

Material Safety Data Sheets

Product Name / Manufacturer Name

11767	3M DUPLICATOR FOUNTAIN CONCENTRATED	3M
11766	3M NEGATIVE COLOR PROOFING FILM HAND DEVELOPER	3M
11819	CLYSAR SHRINK FILMS	E.I. DUPONT DE NEMOURS & CO., INC., POLYMER PRODUCTS DEPT.
11962	CML OIL BASE PLUS COLORS	VAN SON ROYAL DUTCH PRINTING INK FACTORIES
11967	COLORLINK DEVELOPER	HOECHST CELANESE CORP., PRINTING PRODUCTS DIV.
11828	CRYSTAL SF2000 F.S.	VARN PRODUCTS
11769	ELECTRICAL GRADE SILICONE AERO	CRC INDUSTRIES, INC.
11821	KODAK AGUA-IMAGE NEGATIVE DEVELOPER HAND	EASTMAN KODAK CO.
11822	KODAK AGUA-IMAGE NEGATIVE DEVELOPER MACHINE	EASTMAN KODAK CO.
10505	KODAK LIQUID DEVELOPER SYSTEM CLEANER	EASTMAN KODAK CO.
11968	KODAK POLYMATIC PLATE FINISHER	EASTMAN KODAK CO.
11964	LOTION SOAP	GO-JO INDUSTRIES, INC.
8993	LPS PRECISION CLEAN	LPS LABORATORIES, INC.
6428	PRESOLVE AEROSOL	LPS LABS., INC.

11957 METERING ROLLER CLEANER 02019
VARN PRODUCTS

11945 NABC URINAL SCREENS WITH DEODORIZING BLOCKS
SPARTAN CHEMICAL CO., INC.

11823 OFFSET SOY ROTARY / BUSINESS FORMS
SUPERIOR PRINTING INK CO., INC

11960 OPEN POCKET COMPOUND HW-54
SUPERIOR PRINTING INK CO., INC

11956 PERMANENT BLANKET REPAIR 02290
VARN PRODUCTS

11955 REVITOL 02220
VARN PRODUCTS

11966 ROSIN CORE SOLDER
BOW SOLDER PRODUCTS CO.

11959 SUPER JELL COMPOUND 8124
SUPERIOR PRINTING INK CO., INC.

11958 WASH V-120
VARN PRODUCTS CO., INC

APPENDIX I

AEROSOL ANTI-STATIC SPRAY
VAN PRODUCTS CO., INC

AEROSOL INK READI
AVRN PRODUCTS CO., INC

COMPLETE PLATE CLEANER
VARN PRODUCT CO., INC

EXFILMPLUS (SHRINK FILM)
INTERTAPE POLYMER CO.

IPA USP
EXXON MOBIL CHEMICAL COMPANY

L-519
H.B. FULLER CO. (55110)
NACOR 38-4536
NORDSON CORPORATION
NON-FILLING ADDITIVE
VARN PRODUCTS CO., INC
PLATE GUM LGO 1030
LASTRA
PR-0187-EB
H.B. FULLER CO. (55110)
PR-3755
H.B. FULLER CO. (551210)
TOTAL CHROME FREE
VARN PRODUCTS CO., INC
WASH R-228
ANCHOR LITHKEMKO, INC
WEB-PRO 379
VARN PRODUCTS CO., INC

REC.#495082

18/07/02

02/03/123



Estado Libre Asociado de Puerto Rico
Departamento de Salud

ESTADO LIBRE ASOCIADO DE PUERTO RICO
DEPARTAMENTO DE SALUD
SECRETARÍA AUXILIAR PARA SALUD AMBIENTAL

LICENCIA SANITARIA

PUEBLO: SAN GERMAN LICENCIA NUMERO: 623

REGION: OESTE EXPEDIDA: 30 DE SEPTIEMBRE DE 2002

POR LA PRESENTE SE AUTORIZA A LUCAS INSERTCO PRINTING CO. - 39181-3266 A

OPERAR UN INSERTOS/IMPRESA EN ESTA CIUDAD,

(Clase establecimiento, negocio o institución)

DIRECCION: POB. IND. EL RETIRO, CARR.102, KM. 33.2, SAN GERMAN

SUJETO A LAS LEYES Y REGLAMENTOS VIGENTES DEL DEPARTAMENTO DE SALUD O A LOS QUE EN

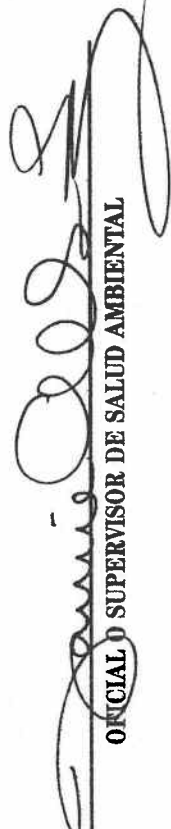
ADELANTE SE DICTAREN. ESTA LICENCIA ES INTRANSFERIBLE Y REVOCABLE POR JUSTA CAUSA.

DEBE RENOVARSE EL 30 DE SEPTIEMBRE DE 2003.

ADVERTENCIA:

Colóquese esta licencia en sitio visible
del establecimiento. Al cesar operaciones devuélvase
esta licencia a la Oficina Local de Salud Ambiental.

aiv


OFICIAL O SUPERVISOR DE SALUD AMBIENTAL

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. 81666		2. Page 1 of 2 Pass Code:	
3. Generator's Name and Mailing Address LUCAS INSERTCO PO BOX 377 SAN GERMAN, P.R.					
4. Generator's Phone () SAN GERMAN, P.R.					
5. Transporter 1 Company Name DIAZ TRANSPORT					
6. EOB Permit # SR-0037					
7. Transporter 2 Company Name (blank)					
8. EOB Permit # (blank)					
9. Designated Facility Name and Site Address PONCE SANITARY LANDFILL PO BOX 7104 / RD 500 BARAMAYA FINAL AVENUE PONCE, PR 00731					
10. EOB Permit # RSM-0058					
C. Facility's Phone 787-841-7775					
11. Waste Shipping Name and Description (blank)					
Handling Code (blank)					
12. Containers No. Type 1-UT					
13. Total Quantity 900					
14. Unit GL					
D. Additional Descriptions for Materials Listed Above (blank)					
15. Special Handling Instructions and Additional Information (blank)					
16. GENERATOR'S CERTIFICATION: I certify the materials above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed / Typed Name		Signature		Date	
17. Transporter 1 Acknowledgement of Receipt of Materials Lucas Insertco		Signature [Signature]		Date 12/13/02	
18. Transporter 2 Acknowledgement of Receipt of Materials Lucas Insertco		Signature [Signature]		Date 12/13/02	
19. Discrepancy Indication Space (blank)					
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19. PL-804					
Printed / Typed Name		Signature		Date	
(blank)		(blank)		(blank)	

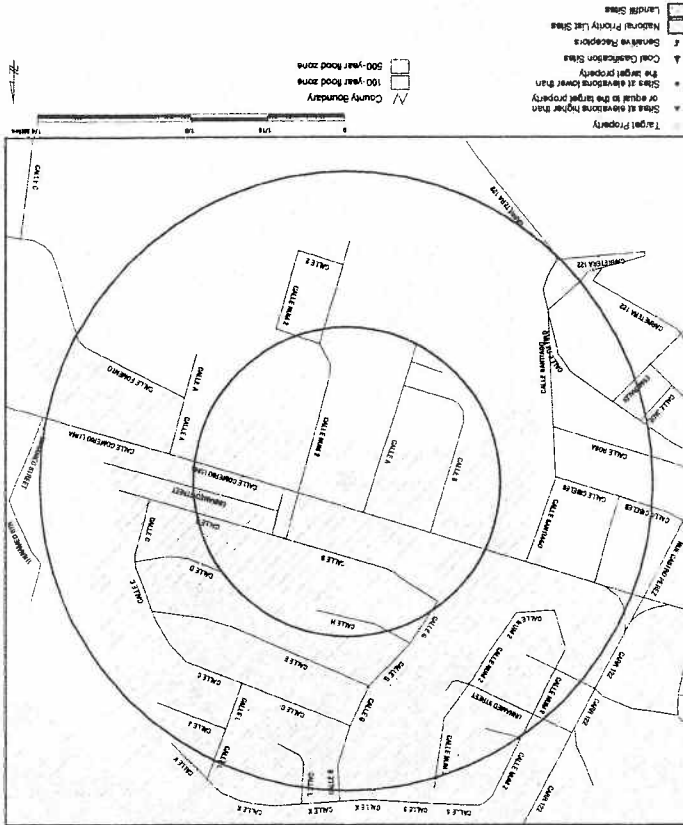
GENERATOR 2ND COPY

05150-110800-8320

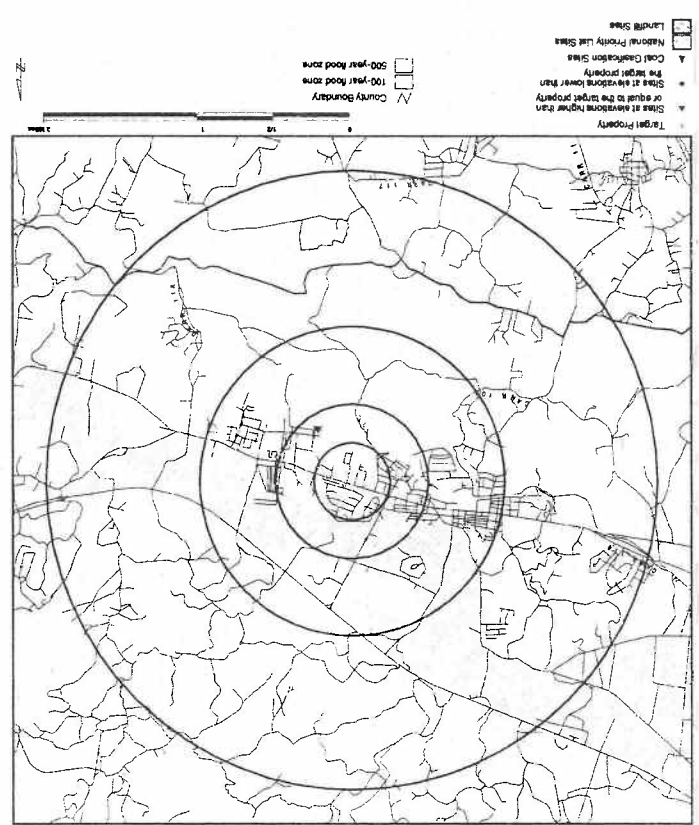
1-Generator's US EPA ID No.		Manifest Document No. 88410		2-Page 1 of		Pass Code:	
NON-HAZARDOUS WASTE MANIFEST							
3-Generator's Name and Mailing Address Lucas Inertco P.O. Box 377 San German, PR 00683 4-Generator's Phone (787) 892-2828							
5-Transporter 1 Company Name Tresona Inc		6-EOB Permit # 81-0147		A-Transporter's Phone 837-0502			
7-Transporter 2 Company Name		8-EOB Permit #		B-Transporter's Phone			
9-Designated Facility Name and Site Address PONCE SANITARY LANDFILL PO BOX 7104 / RD 500 BARAMAYA FINAL AVENUE PONCE, PR 00731				10-EOB Permit # RSM-0058		C-Facility's Phone 787-841-7775	
11-Waste Shipping Name and Description Lamp Fluorescent		Handling Code 030403/L29Y2275		12-Containers No 1 Type 380		13-Total Quantity Unit Wt/Vol	
d.							
c.							
b.							
a.							
D-Additional Descriptions for Materials Listed Above							
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I certify the materials above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.							
Printed / Typed Name Jose L. Zana		Signature		Month 04		Day 17	
Printed / Typed Name Serge A. Figueroa		Signature		Month 04		Day 17	
18-Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month 04		Day 17	
19. Discrepancy Indication Space		Signature		Month 04		Day 17	
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.							
Printed / Typed Name C. R. G. G.		Signature		Month 04		Day 17	



APPENDIX C
LUCAS INSERTCO
EDR DATABASE REPORT



DETAIL MAP - 0931914.1r - AMEC Earth & Environmental



OVERVIEW MAP - 0931914.1r - AMEC Earth & Environmental

TC0901914 17 EXECUTIVE SUMMARY 4

5. ADVANCE 25/1/2022 4:44:0602

[illegible]

EXECUTIVE SUMMARY

A review of the FINCS list, as provided by ECR, and dated 10/10/2002 has revealed that there is 1 F NDS site within approximately 0.5 miles of the target property.

Equal/Highest Elevation	Address	Dist/Dir	Map ID
AUTO PIEZAS LUGO	49 CALLE SAVILLA	1/4 - 1/2 SE	1

Dist / Dir	Map ID	Page
1/4 - 1/2SE	1	5

EXECUTIVE SUMMARY

[illegible]

Database Release Frequency: Quarterly
Date of Government Version: 12/2012
Date of Last ECR Column Update: 03/24/2013
Date of Next Scheduled EDR Contact: 03/24/2013

FRTS INSP, FIFRA/TSCA Tracking System = FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

DATE
Date of Government Version: 12/31/98
Database Release Frequency: Every 4 Years
Date of Last EDR Contact: 12/10/02
Date of Next Scheduled EDR Contact: 03/10/03

Telephone 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant.

Database Release Frequency: Annually
Date of Next Scheduled EDR Contact: 03/24/03
TSCA: Toxic Substances Control Act

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313

TRIS: Toxic Chemical Release Inventory System
Source: EPA

made it impossible to continue to update the information contained in the database

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-554-4104

of PCB's who are required to notify the EPA of such activities.

PAQS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
PCB Activity Database: PAQS identifies nonstationary, nonpoint-source, nonhazardous waste management, treatment, storage, and disposal

Date of Government Version: 10/15/91	Date of Next Scheduled EDR Contact: 02/27/93
Database Release Frequency: Not Up-to-Date Planned	Date of Last EDR Contact: 11/25/92

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Telephone /03-415-0723
Record of Decision ROD documents mandate a permanent remedy at an NFL Superfund site containing technical and health information to aid in the cleanup

Database Release Frequency: Varies
Date of Next Scheduled EDIR CO
ROD: Records Of Decision
Source: EPA

Major legal settlements that establish responsibility and standards for cleanup at NFL (Superfund) sites periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version N/A
Date of Last EDR Contact N/A

Source: EPA Regional Offices

and Treatment, Storage, and Disposal Facilities

The Environmental Recording System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BBS numbers derived from the records are listed in the following table.

Source = JANIS
Telephone: 800-424-9346

FEDERAL ASTM SUPPLEMENTAL RECORDS

Database Release Frequency: Annually
Date Made Active at ECR: 07/15/02
Elapsed ASTM days: 13
Date of last ECR Contact: 07/21

Telephone: 202-692-2342
Emergency Response Notification System: ERNS records and stores information on reported releases of oil and hazardous substances

Source: National Response Center, United States Coast Guard

Act (KCHA)
Date of Government Version: 09/03/02
Date Made Active at EDR: 10/29/02
Elapsed ASTM days: 34
Date of Data Arrival at EDR: 09/29/02

Resource Conservation and Recovery Information System. RCRIIS includes selective information on sites which generate, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act. Telephone 800-424-9348

Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/05
TCRIS: Resource Conservation and Recovery Information System

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity
 Date of Government Version: 09/29/02
 Date of Data Arrival at EDR: 10/

CORRECTS: Corrective Action Report
Source: EPA

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

[illegible][illegible][illegible][illegible]

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

GEOCHECK 2 - PHYSICAL SETTING SOURCE MAP FINDINGS

FC0931914 11 Page A-22

TC0901914.r Page A-21

TC0931914 11 Page 2-20

TC0921374 11 Page A-21

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

ENFORCEMENT INFORMATION.

[illegible]

GEOCHECK 8 - PHYSICAL SETTING SOURCE MAP FINDINGS

ENFORCEMENT INFORMATION:

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

ENFORCEMENT INFORMATION:

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

ENFORCEMENT INFORMATION:

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

[illegible]

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

GEOCHECK - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

Not Reported

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100 year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUICLON[®] Information System
Source: EDR proprietary database of groundwater flow information.
EDR has developed the AQUICLON Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically documented groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P. O. Shreve, R. E. Arvid and V. J. Bower, Geology of the Conterminous U.S. at 1:250,000 Scale - A digital representation of the 1974 P. O. Shreve and H. L. Bower Map, USGS Digital Data Series DDS - 11 (1994).

STATSOIL: State Soil Geographic Database
The U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSOIL are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

PWS ENR: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any other system which provides water to at least 25 people for at least 60 days annually.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 300,000 wells, springs, and other sources of groundwater.

Area Radon Information

Source: USGS
Telephone: 303-702-4110
The National Radon Database has been developed by the U.S. Environmental Protection Agency.
The study covers the years 1988 - 1992. While the USGS has been supplementing information collected at private sources such as universities and research institutions.

TC0001914 1r Page A-36

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones

Source: EPA
Telephone: 202-564-9370
Section 307 & 309 of RCRA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Epilimnia: World outcrops specimens, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

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EDR Site ReportTM

PR INDUSTRIAL DEVELOPMENT CO
RD 102 KM 33.2
SAN GERMAN, PR 00683

Inquiry Number:

March 21, 2003

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com



TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of over 4 million government records from more than 600 federal, state and local environmental databases. The report is divided into three sections:

Section 1: Facility Summary Page 3
Summary of facility filings including a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

Section 2: Facility Detail Reports Page 4
All available detailed information from databases where sites are identified.

Section 3: Databases Searched and Update Information Page 6
Name, source, update dates, contact phone number and description of each of the databases searched for this report.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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SECTION 1: FACILITY SUMMARY

FACILITY 1 PR INDUSTRIAL DEVELOPMENT CO RD 102 KM 33.2 SAN GERMAN, PR 00683 EDR ID #1004778977 EPA #PRR000007591	AREA
YES - p4	WASTE MANAGEMENT Facility generates hazardous waste (RCRIS)
NO	Facility treats, stores, or disposes of hazardous waste on-site (RCRIS/TSDF)
NO	Facility has received Notices of Violations (RCRIS/VIOL)
NO	Facility has been subject to RCRA administrative actions (RAATS)
NO	Facility has been subject to corrective actions (CORRACTS)
NO	Facility handles PCBs (PADS)
NO	Facility uses radioactive materials (MLTS)
NO	Facility manages registered aboveground storage tanks (AST)
NO	Facility manages registered underground storage tanks (UST)
NO	Facility has reported leaking underground storage tank incidents (LUST)
NO	Facility has reported emergency releases to the soil (ERNS)
NO	Facility has reported hazardous material incidents to DOT (HMIRS)
NO	WASTE DISPOSAL Facility is a Superfund Site (NPL)
NO	Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (CERCLIS)
NO	Facility has a reported Superfund Lien on it (LIENS)
NO	Facility is listed as a state hazardous waste site (SHWS)
NO	Facility has disposed of solid waste on-site (SWFLF)
NO	MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)
NO	Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)
NO	Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)
NO	Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)
YES - p5	Facility is listed in EPA's index system (FINDS)
NO	Facility is listed in a county/local unique database (LOCAL)
NO	POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP
2	TOTAL (YES)

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility generates hazardous waste

DATABASE: Resource Conservation and Recovery Information System (RCRIS)

PR INDUSTRIAL DEVELOPMENT CO
RD 102 KM 33.2
SAN GERMAN, PR 00683
EDR ID #1004778977

Facility Name:

PR INDUSTRIAL DEVELOPMENT CO
RD 102 KM 33.2
SAN GERMAN, PR 00683

Mailing Address:

PO BOX 362350
SAN JUAN, PR 00936 - 2350

Contact:

IGDALIE RODRIGUEZ, SUPERVISOR
PO BOX 362350
SAN JUAN, PR 00936 - 2350
(787) 754-1615

EPA-ID:

PRR000007591

Rank Date:

Not reported
Not reported

Classification:

Conditionally Exempt Small Quantity Generator

Description:

Handler:
- generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or
- generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time;
- 1 kg or less of acutely hazardous waste; or
- 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or
- generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or
- 1 kg or less of acutely hazardous waste; or
- 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or
- 1 kg or less of acutely hazardous waste; or
- 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Legal Status:

Private

Owner:

PR INDUSTRIAL DEVELOPMENT CO
PO BOX 362350
SAN JUAN, PR 78775 - 4161
(787) 754-1615

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

MULTIMEDIA

Facility is listed in EPA's index system

DATABASE: Facility Index System (FINDS)

PR INDUSTRIAL DEVELOPMENT CO
RD 102 KM 33.2
SAN GERMAN, PR 00683
EDR ID #1004778977

This site is listed in the Federal FINDS database. The FINDS database may contain references to records from government databases included elsewhere in the report. Please note: the FINDS database may also contain references to out of date records formerly associated with the site.

EPA-ID: 110007820563

EPA Records Indicate Facility Is Listed In:

Facility Registry System (FRS)

110007820563

System ID:
Facility Name:
Facility Address:
DUNS Number:
US Fed Gov Facility:
Indian Tribal Land:
Sic Code(s):
Date Reported to Government:
Not reported
Not reported
Not reported
SAN GERMAN, PR 00683
RD 102 KM 33.2
PR INDUSTRIAL DEVELOPMENT CO
110007820563

EPA-ID: 110007820563

EPA Records Indicate Facility Is Listed In:

Resource Conservation and Recovery Act Information system (RCRAINFO)

110007820563

System ID:
Facility Name:
Facility Address:
DUNS Number:
US Fed Gov Facility:
Indian Tribal Land:
Sic Code(s):
Date Reported to Government:
Not reported
Not reported
Not reported
SAN GERMAN, PR 00683
RD 102 KM 33.2
PR INDUSTRIAL DEVELOPMENT CO
PRR000007591
200112141954

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

WASTE MANAGEMENT

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 09/09/2002
Database Release Frequency: Varies
Date of Last EDR Contact: 03/07/2003
Date of Next Scheduled Update: 03/24/2003

BRS: Biennial Reporting System

Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/1999
Database Release Frequency: Biennially
Date of Last EDR Contact: 03/17/2003
Date of Next Scheduled Update: 06/16/2003

RAATS: RCRA Administrative Action Tracking System

Source: EPA
Telephone: 202-564-4104
RCRA Administrative Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administrative actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 03/10/2003
Date of Next Scheduled Update: 06/09/2003

CORRACTS: Corrective Action Report

Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 01/15/2003
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 03/10/2003
Date of Next Scheduled Update: 06/09/2003

PADS: PCB Activity Database System

Source: EPA
Telephone: 202-564-3887
PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/12/2002
Database Release Frequency: Annually
Date of Last EDR Contact: 02/10/2003
Date of Next Scheduled Update: 05/12/2003

MLTS: Material Licensing Tracking System

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/16/2003
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/2003
Date of Next Scheduled Update: 04/07/2003

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued...

PR UST: Underground Storage Tank Facilities
Source: Environmental Quality Board
Telephone: 787-767-8056
Date of Government Version: 03/01/2002
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 02/26/2003
Date of Next Scheduled Update: 05/26/2003

PR LUST: Leaking Underground Storage Tanks
Source: Environmental Quality Board
Telephone: 787-767-8056
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.
Date of Government Version: 03/01/2002
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 02/26/2003
Date of Next Scheduled Update: 05/26/2003

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.
Date of Government Version: 12/31/2001
Database Release Frequency: Annually
Date of Last EDR Contact: 01/27/2003
Date of Next Scheduled Update: 04/28/2003

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.
Date of Government Version: 11/30/2002
Database Release Frequency: Annually
Date of Last EDR Contact: 01/23/2003
Date of Next Scheduled Update: 04/21/2003

WASTE DISPOSAL

NPL: National Priority List
Source: EPA
Telephone: Not reported
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.
Date of Government Version: 01/29/2003
Date Made Active at EDR: 03/04/2003
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/04/2003
Elapsed ASTM Days: 28
Date of Last EDR Contact: 02/04/2003

PROPOSED NPL: Proposed National Priority List Sites
Source: EPA
Telephone: Not reported

Date of Government Version: 01/29/2003
Date Made Active at EDR: 03/04/2003
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/04/2003
Elapsed ASTM Days: 28
Date of Last EDR Contact: 02/04/2003

DELISTED NPL: National Priority List Deletions

Source: EPA
Telephone: Not reported
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.
Date of Government Version: 01/29/2003
Date Made Active at EDR: 03/04/2003
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 02/04/2003
Elapsed ASTM Days: 28
Date of Last EDR Contact: 02/04/2003

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued...

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
 Source: EPA
 Telephone: 703-413-0223
 CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/13/2002
 Date Made Active at EDR: 01/15/2003
 Database Release Frequency: Quarterly
 Date of Last EDR Contact: 12/26/2002
 Elapsed ASTM Days: 20

CERCLIS-NFRA: CERCLIS No Further Remedial Action Planned

Source: EPA
 Telephone: 703-413-0223
 As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRA) have been removed from CERCLIS. NFRA sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRA sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 12/13/2002
 Database Release Frequency: Quarterly
 Date of Last EDR Contact: 12/26/2002

NPL LIENS: Federal Superfund Liens

Source: EPA
 Telephone: 205-564-4267
 Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
 Date Made Active at EDR: 03/30/1994
 Database Release Frequency: No Update Planned
 Date of Last EDR Contact: 02/27/2003
 Elapsed ASTM Days: 56
 Date of Data Arrival at EDR: 02/02/1994

PR SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Source: EPA
 Telephone: 703-413-0223
 State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 07/12/2001
 Database Release Frequency: Quarterly
 Date of Last EDR Contact: 02/26/2003
 Date of Next Scheduled Update: 05/26/2003

PR SWF/LF:

MULTIMEDIA

TRIS: Toxic Chemical Release Inventory System
 Source: EPA
 Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2000
 Database Release Frequency: Annually
 Date of Last EDR Contact: 12/26/2002
 Date of Next Scheduled Update: 03/24/2003

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

....Continued....

POTENTIAL SUPERFUND LIABILITY

PRP: Potentially Responsible Parties

Source: EPA

Telephone: 202-564-6064

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/08/2003

Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/07/2003

Date of Next Scheduled Update: 04/07/2003

[illegible]

SECTION 1: FACILITY SUMMARY

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in EPA's index system
DATABASE: Facility Index System (FINDS)

CARRISSE DIST. COMPONENTS, INC.
PARQUE INDUSTRIAL FL RETIRO
SAN GERMAN PR 00983
EIR ID #1006183295

FOR ID #1006183285

Report# Prepared for February 24, 2003 Page# 2 of 9

[illegible]

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

searched for this report.

Training source, update dates, contact phone number and description of each of the databases searched for this report.

Section 2: Facility Detail Reports All available detailed information from databases where sites are identified.

continuity of facility through a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

The EDR-Site ReportTM is a comprehensive presentation of government filings on a facility identified in a search of over 4 million government records from more than 600 federal, state and local environmental databases. The report is divided into three sections:

TABLE OF CONTENTS

**The Source
For Environmental
Risk Management
Data**

3530 Post Road
Southport, Connecticut 06490
Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.ednet.com

February 24, 2003

Inquiry Number:

CARIBE G.E. DIST. COMPONENTS, IN
PARQUE INDUSTRIAL EL RETIRO
SAN GERMAN, PR 00683

EDR Site Report™



Environmental
Data
Resources, Inc.

Tour Release Inventory System TIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

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[illegible]

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued...

POTENTIAL SUPERFUND LIABILITY

Source: EPA
Listing of verified Potentially Responsible Parties
Release 202-551-6064
Date of Government Version: 01/09/2003
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/07/2003
Name of Next Scheduled Update: 04/07/2003

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SECTION 1: FACILITY SUMMARY

[illegible]

Environmental
Data
Resources, Inc.

EDR Site Report™

SAN GERMAN S/S #651
RD. #102, KAL. 33.6
SAN GERMAN, PR 683

Inquiry Number:

February 24, 2003

**The Source
For Environmental
Risk Management
Data**

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.ednet.com

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

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SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued

[illegible]

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued...

POTENTIAL SUPERFUND LIABILITY

PRP Potentially Responsible Parties

Telephone: 202-564-6064

A listing of verified Potentially Responsible Parties

Database Release from January, Quarterly

Date of Government Version: 01/08/2003

Date of Last EDR Contact: 01/07/2003

Date of Most Recent Update: 04/07/2003

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SECTION 3: DATABASES SEARCHED AND UPDATE DATES

MULTIMEDIA Facility is listed in EPA's index system
DATABASE: Facility Index System (FINDS)
 This is listed in the Federal FINDS database. The FINDS database may also contain references to records from government databases located elsewhere in the report. Please note: The FINDS database may also contain references to out of date records formerly associated with the site.
 EPA ID: 110007871697
 EPA Records Index Facility is Listed in
 Facility Registry System (FRS)
 TXACO PRC INC SAN GERMAN SS
 RD 102 KM 13.6
 SAN GERMAN, PR 00883
 EPCRA 113 (b)
 EPCRA 113 (b) 6
 EPCRA 113 (b) 6
 EPCRA 113 (b) 6

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued...

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued...

WASTE MANAGEMENT	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6
WASTE MANAGEMENT	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6

WASTE MANAGEMENT	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6
WASTE MANAGEMENT	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6	RCRA: Hazardous Waste Tracking System EPA ID: 110007871697 EPA Records Index Facility is Listed in Facility Registry System (FRS) TXACO PRC INC SAN GERMAN SS RD 102 KM 13.6 SAN GERMAN, PR 00883 EPCRA 113 (b) EPCRA 113 (b) 6 EPCRA 113 (b) 6 EPCRA 113 (b) 6

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued

POTENTIAL SUPERFUND LIABILITY

PRP, Potentially Responsible Parties
Superfund EPA
Telephone 202-561-6064
Listing of Potentially Responsible Parties
Date of Last EDR Contact 01/09/2003
Database Release Frequency Quarterly
Date of Next Scheduled Update C3/10/2003

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued

SSR's, Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act as amended (29 Stat. 373) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 15 each year. Each establishment must report the types and amounts of pesticides active ingredients and solvents being produced, and those having been produced and sold or distributed in the past year.
Database Release Frequency Annually
Date of Last EDR Contact 01/21/2003
Date of Next Scheduled Update C3/27/2003
Source EPA
TSCA, Toxic Substances Control Act
TSCA Chemical Substance Inventory list includes data on the production volume of chemical substances included on the TSCA Chemical Substance Inventory list.
Database Release Frequency N/A
Date of Last EDR Contact 12/11/1996
Date of Next Scheduled Update C3/10/2003
Source EPA/Office of Invention, Pesticides and Toxic Substances
FTS, Federal Insecticide, Fungicide, & Rodenticide Act/TSCA (Toxic Substances Control Act)

FTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency FTS contacts the Agency on a quarterly basis.
Database Release Frequency Quarterly
Date of Last EDR Contact 03/29/2003
Date of Next Scheduled Update C3/29/2003
Source EPA
FTS INSP, FIFRA/TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide & Rodenticide Act) (Toxic Substances Control Act)

FINDS, Facility Index System facility identification Invasive Program Summary Report
Source EPA
Facility Index System (FINDS) contains both facility information and pointers to other sources that contain more data. FINDS includes the following links: Database, the report, FDS (Federal Compliance System), ARS (Automated Information Retrieval System), DOCKET (Enforcement Document used to manage and track information on all environmental statutes), FURTS (Federal Enforcement Document used for all environmental statutes), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).
Database Release Frequency Quarterly
Date of Last EDR Contact 01/06/2003
Date of Next Scheduled Update C3/07/2003
Source EPA
Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas Sites is provided exclusively by types of hazards which may be found at such sites, contact your EDR customer service representative

to EDR by Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative
The information contained in this report has predominantly been obtained from publicly available sources produced by others other than Real Property Scan, while reasonable steps have been taken to ensure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of owners at any site. This report does not constitute a legal opinion.
Disclaimer Provided by Real Property Scan, Inc.

EDR Site Report™

WALLACE INTERNATIONAL OF PR INC
8 STREET RETIRO IND. PARK
SAN GERMAN, PR 683

3530 Post Road
Southport, Connecticut 06490
Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

SECTION 1: FACILITY SUMMARY

[illegible]

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility manages registered underground storage tanks

DATABASE: Petroleum Storage Tank Database (UST)

WALLACE INTERNATIONAL OF PR INC
8 STREET RETIRO INO PARK
SAN GERMAN PR 683
EUR ID #100566094
Facility ID 2-861986
Tank Status Closure

MULTIMEDIA

Date of Current Version: 07/12/2001
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/25/2002
Date of Next Scheduled Update: 02/24/2003

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLA's. Those sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup

Database Review Frequency: No Update Planned
Date Made Active at EDR: 03/30/1994
Elapsed As: 141 Days: 56
Date of Last EDR Contact: 11/25/2002

Compensation and Liability Act (CERCLA) of 1980. The USEPA has the authority to file liens against real property in order to recover remedial action expenditures when the property owner receives notification of potential liability. USEPA complies a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991

Date of Data Arrival at EDR: 02/02/1994

NPL LIENS: Federal Suprafund Liens
Source: EPA

investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 12/13/2002
 Date of Last EDR Contact: 12/28/2002

As of February 1985, CERCLIS sites designated "No Further Remedial Action Planned" (NFAP) have been removed from CERCLIS. NFAP sites may be sites where, following an initial investigation, no contamination was found; contamination was removed quickly by the owner for the site to be placed on the NPL; or the contamination was not serious enough to require Federal Supervised action or NPL consideration. Telephone: 703.411.0223

Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/25/2002

CECHS conducts oral and written interviews with sales and has been reported to the US EPA by states, municipalities, private companies and state agencies pursuant to section 703 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA contains rules which are either proposed to or on the National Priorities List (NPL), and sites which are in the screening and assessment phase for possible inclusion on the NPL.

CEARCUS, Comprehensive Environmental Response, Compensation, and Liability Information System

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued.

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Date of Government Version	10/21/2002	Date of Next FDR Contact	01/09/2003
Database Release Frequency	Quarterly	Date of Next Scheduled Update	01/07/2003

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Reference: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8 10 sites which possess or use radioactive materials and which are subject to NRC licensing requirements.

Date of Government Version: 09/20/2002
Date of Last EDR Contact: 02/12/2003

PAUSE PCB Activity Database System
Source: EPA
Telephone: 202-564-1867

Date of Software Version: 09/29/2002
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/09/2002
Date of Next Scheduled Update: 03/10/2003

Database Release Frequency: No Update Planned

DATE OF NEXT SCHEDULED UPDATE: 03/01/2003

CORRACTS: Corrective Action Report

Source: EPA

Telephone: 300 424 0346

Because a decrease in agency resources made it impossible to continue to update the information contained in the database

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
Under RCRA, permitting is major regulatory and enforcement activity by the
RCRA Administrative Action Tracking System. RAATS contains records based on enforcement activity issued by the

generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/1999
 Date of latest EDR Contract: 12/1/2002
 Date of latest EDR Contract: 03/31/2003

BRIS - Biometric Recording System
Source: EPANIS
Date of Last Data Entry: 09/24/2003
Database Release Version: 09/24/2003
Date of Last Data Change: 12/29/2002

Source: EPA/NHTS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System (RCRIS) includes selective information on hazardous waste, transport, storage, treatment and disposal of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Prepared by: *[Signature]* Date: *[Date]*

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SECTION 3: DATABASES SEARCHED AND UPDATE DATES

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued

POTENTIAL SUPPLY AND DEMAND

Source: EPA
Estimated 2025-2030
A listing of verified Potentially Responsible Parties
Date of last update: 01/07/2003
Database Revision Frequency: Quarterly

Date of last update: 01/07/2003
Date of next scheduled update: 04/01/2004

[illegible]

This site is listed in the *Public FIMS* database. The *FIMS* database may contain references to records from government records formerly associated with the site.

110000580853 Facility Registry System (FRS)

WALLACE INTERNATIONAL DE PR INCORPORATED
EL RETIRO INDUSTRIAL PARK
SAN GERMÁN, PR 00683

NOT REPORTED
200101291448

110000580853

WALLACE INTL DE P.R. INC
EL RETIRO INDUSTRIAL CALLE B
SAN GERMAN, P.R. 00983-1177

Not reported
3914
200112171520

Telephone 202-260-1531
Toxic Release Inventory System: TRLIS identifies facilities which release toxic chemicals to the air,
water and land in reportable quantities under Superfund Title III of the CAA.
Date of Government Version: 12/31/2000
Date of Release Frequency: Annually
Date of Last EDR Contact: 12/26/2002
Date of Next Scheduled Update: 03/24/2003

MULTIMEDIA

Date of government frequency	07/26/2002
Date of CIA/CDC Consultation	11/25/2002
Date of last scheduled update	02/28/2003

14-00000	70508461	1887	<p>Under the authority granted the USEPA by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to request federal support from the U.S. Department of Justice (DOJ) to bring civil actions against nonparty in order to recover remedial action expenditures or when the property owner incurs notification of potential liability. USEPA completes a listing of filed notices of supplemental liens.</p>	<p>Date of Document Version: 10/15/1991</p> <p>Date Made Active at EDR: 03/30/1994</p> <p>Databases Released Frequency: No Update Planned</p> <p>Date of Last EDR Contact: 11/25/2002</p>
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unproductive urban sites.

Date of Government Version: 12/13/2002
 Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/26/2002
 Date of Next Scheduled Update: 03/24/2003

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require further Superfund action or NPL consideration. EPA's policy is to remove sites from CERCLIS that are not on the NPL, and to delete them from the CERCLIS database.

Date of Government Version: 12/13/2002
 Date Made Active at EDR: 01/15/2003
 Database Release Frequency: Quarterly
 Date of Last EDR Contact: 12/26/2002
 Date of Data Arrival at EDR: 12/26/2002
 Elapsed ASTM Days: 20

CEERLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-6223
CEERLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

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states which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Invention Version 1/12/2002
 Database Release Frequency 1 yearly
 Date of Last EDR Contact 01/07/2003
 Date of Next Scheduled Update 01/07/2003

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169

Telephone 702.564.3887
PCB Activity Database PADS identifies generators, transporters, commercial stores and/or brokers
and disposers of PCBs who are required to notify the EPA of such activities.
Date of Government Version: 09/20/2002
Date of Last EPC Contact: 02/10/2003

Date of Government Version: 05/29/2002
 Date of last EPR Contact: 12/09/2002
 Date of Next Scheduled Update: 03/10/2003
 PADs: ☒ CB Activity Database System

CORRACIS: Corrective Action Report
Source: EPA
Telephone: 800-421-9346
CORRACIS identifies hazardous waste handlers with RCRA corrective action activity

Because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Source: EPA
Telephone: 202-561-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administrative action cases after September 30, 1995, data entry in the RAATS database was discontinued.

Date of Government Version: 12/31/1999	Date of Next Scheduled Update: 03/17/2003
--	---

BRIS: Bristol Reporting System
Source: EPA/NRTS
Telephone: 800 421 0346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRIS captures data from two groups: Large Quantity

Conservation and Recovery Act (CRA)
 Date of Government Version: 09/09/2002
 Database Release Frequency: Varies
 Date of Last EDR Contact: 12/26/2002
 Date of Next Scheduled Update: 03/24/2003

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NRIS
Telephone: 304-241-9346
Resource Conservation and Recovery Information System
RCRIS includes selective information on sites

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard

If a mailing currency of the following federal, state and local salaries, EHR contacts the appropriate government agency on a quarterly basis as required.

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Continued

POTENTIAL SUPERFUND LIABILITY

Page Potentially Responsible Parties
Source: EPA
202-564-6064
A listing of verified Potentially Responsible Parties

Database Review Frequency: Quarterly
Database of Government Vendors: 01/08/2003
Date of Last SCRI Contact: 01/07/2003
Date of Last SCRI Update: 01/07/2003

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[illegible]

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Source: Environmental Quality Board
Telokhane 282-767-8056

PR LUST: Leaking Underground Storage Tanks
Source: Environmental Quality Board

underground storage tank records, and the information stored

Date of Next Scheduled Update: 02/24/2003 Database Release Frequency: Semi-Annually

Country: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System (ENRIS) records and other information as reported (release of

Date of (Government) Version: 12/31/2003
Database Release Frequency: Annually
Date of Next Scheduled Update: 04/28/2003
Date of Last EURL Contact: 01/27/2003

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation

18 001

WASTE DISPOSAL

Source: EPA
Telephone Not Reported

such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Database Release Frequency: Semi-Annually
Date Made Active at EDR: 12/09/2002
Elapsed ASIN Days: 39
Date of Last EDR Contact: 02/04/2003

Source: EPA
: Not reported. Not reported

Date Made Active at EDR: 12/09/2002
Database Release Frequency: Semi Annually
Elapsed ASTM Days: 35
Date of Last EDR Contact: 02/04/2003

Source: EPA
DELISTED NPL: National Priority List Deletions

that it is a user to delete sites from the NPL in accordance with 40 CFR 300.42 (e), sites may be deleted from the NPL where no further response is appropriate.

Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/04/2003

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires

active ingredients and devices being produced and those having been produced and sold or distributed in the past year.

Database Release Frequency	Annually
Date of Next Scheduled Update	04/27/2003

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Date of Government Version: 12/31/1998
Date of Last EDR Contact: 12/10/2002

FTS: FIFRA/TSCA Tracking System - FIFRA (Federal Insecticide Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Co

For more information on this and other environmental issues, contact the American Association of Environmental Engineers and Scientists at (800) 452-6263.

Database Release Version: 10.2.0.302
Date of Next Scheduled Update: 03/24/2003

Source: EPA
Telephone: 202-564-2501

Database Release Frequency: Quarterly
Date of Next Scheduled Update: 03/24/2003

Source: EPA
Telephone Not Reported
EPA's Index System (EINIS) contains both facility information and "pollution" to other sources that

of a particular environmental enforcement system, C-DOCKET (Environmental Docket System) used in track criminal enforcement and track information on civil judicial enforcement cases; all environmental statutes); FURS (Federal Underground Injection Control); C-DOCKET (Criminal Docket System used in track criminal enforcement)

Date of Government Version: 10/10/2002
Date of Last EDR Contact: 01/06/2003

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to ensure the accuracy of the report, Real Property

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Report# Prepared for / February 24, 2017

SECTION 3: DATABASES SEARCHED AND UPDATE DATES

...Continued

POTENTIAL SUPERFUND LIABILITY
PAP: Potentially Responsible Parties
Source: EPA
Telephone: 202-554-4064
A listing of verified Potentially Responsible Parties
Database Release Frequency: Quarterly
Date of Database Version: 01/08/2003

Date of Last EPC Query: 01/07/2003
Date of Next Scheduled Update: 04/07/2003

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004
NOV 18 AM 9:01

Environmental Analysis

Installation of a Wastewater Discharge and Disposition Reduction System

Submitted by:
Eng. Ricardo Santana
Environmental Coordinator

NJP Insertco
a subsidiary of Menasha Corporation
San Germán, Puerto Rico

November 11, 1996

Introduction

NJP Insertco has been in operations since 1985 with the former name of Insert Corporation of Puerto Rico, Inc., but with Menasha Corporation's acquisition in March 1995, an expansion project began and starting on March 1996, we moved our Insert and Outsert manufacturing operations to PRIDCO facility S-0551-0-54, located at Industrial Park El Retiro, San Germán.

In our search for a safer workplace, we have incorporated the usage of more environmentally conscious products and raw materials, at the cost of the generation of a wastewater stream that arises from our printing process whose disposition costs have led us to the installation of a wastewater evaporation system that will help us reduce the regular wastewater volume by around 95%¹.

Even though there will not be a negative environmental impact from the installation, usage and maintenance of the evaporation unit, the construction of a Storage Room at the Southwest portion of the facility is required to house the evaporator and its instrumentation, a project which will be discussed throughout this document.

This Environmental Analysis is submitted in compliance with the Public Environmental Policy Law of the Commonwealth of Puerto Rico; Article 4C, Law #9 of June 18, 1970.

¹

Additional information on the evaporation system is included as part of Appendix A.

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Social and Economical Aspects	8

Project Description

For the installation of the LS-55 Evaporation Still, the construction of a Storage room at the southwestern part of PRIDCO facility S-0551-0-54, located at Industrial Park El Retiro in San Germán is required. This storage room will at the same time store the chemicals used intrinsically in our production process, all of which are currently being kept in our original facility and have to be transported and/or transferred every time their usage is required.

Facility Description

The structure consists of 36,000 ft² of internal production area, in which our production printing process has been arranged; together with enough area for the storage of raw materials, an employee break-room, and a designated area for conferences and/or training sessions. The facility is bounded by a vacant PRIDCO facility at the north, Wallace International and PREPA's electrical substation at the west, General Electric's facility on the south, and a drainage ditch that runs parallel to PR 102 at the east².

The storage room in discussion will occupy an area of 220 ft² (12' x 18') and will be constructed out of concrete, 4 x 4 columns of galvanized iron, structural iron (or its equivalent) and galvalun. An internal electrical grounding system will be installed to provide for the proper groundage of all flammable liquid containers, as well as for the evaporation unit.

² Further details can be appreciated by referring to Appendix B, **Site Plan of Insertco Facility**

Utilities

Water will be one of the utilities required for the condenser and cooling coil that drops the temperature of the evaporator's body. At regular operation, the condenser requires a flow of $1\frac{1}{2}$ g.p.m., while the cooling coil requires 7 g.p.m. for the tank cool-down. The condenser will work while the evaporator is in operation for approximately 12 hours; the cooling coil will require water flow for one hour, as recommended by the manufacturer.

Outlet temperatures are well within the PRASA parameters for sewer discharge temperature of 40 °C; the outlet temperature from the condenser is expected to be 80°, 102°F from the cooling coil. All calculations are included as part of this documentation on Appendix C ³.

Power consumption of the evaporation unit will not exceed 6.6 kVA (220 V x 30 A; single phase) which could be considered non-significant, since our average consumption is near the vicinity of 440 kVA and the electrical transformer that energizes the whole facility has a capacity of 1,000 kVA. No significant changes or alterations will be required in the internal electrical distribution other than providing a 220 V single phase line, similar to the one installed for the domestic usage of an electrical stove.

³

Thermodynamic properties were all obtained from Perry's **Chemical Engineers Handbook**, 6 Edition; equations used were obtained from Randall N. Robinson's **Chemical Engineers Reference Manual** and Larry E. Wright's **Chemical Engineering Quick Reference Cards**.

Operation Process

The LS-55 Little Still Solvent Recovery Unit is manufactured by Finish Engineering Co., Inc., Pennsylvania; originally designed to recover contaminated organic solvents safely. Its construction design is an advantage for our project, since the unit comes with many safety standard features, such as an explosion proof tank and NEMA-7 instrumentation. These exceeded safety features will provide a safer environment for operators working with a non-flammable and non-explosive waste stream. Our wastewater proved to be non-hazardous after tested for RCRA parameters of ignitability, corrosivity and reactivity. In our situation, the solvent recovered is essentially water with dissolved organics in concentrations of parts per billion (ppb).

The unit's operation consists mainly on an electrical resistance that will transfer heat directly to the boiling tank. All the material to be evaporated will be poured directly to a polyethylene liner inside the tank which will serve to permit the collection of waste concentrates easily without having to clean the tank itself and to protect the walls of the tank from fouling accumulation, which leads to higher costs in electrical consumption due to poor heat transfer. Once the material evaporates, convective flow transfers it through the condensing heat exchanger. All water condensates will be collected in designated drums and reused.

Electrical and heat transferring parts are properly isolated from the operator. The boiling tank capacity is 55 gallons and the unit is capable of evaporating up to 4 gallons per hour of our particular waste.

Environmental Considerations

Water

The equipment requires water for the condensation of distillates and for the cool-down of the tank itself (if it were necessary). The volume of water for condensation will be approximately 72 gallons a month and if required, cool-down will not require more than 30 gallons a month, for a total of $102 \pm 10\%$ gallons on a monthly basis.

This water will not undergo any chemical processing and its discharge will be at a temperature slightly higher than that received⁴, but still under the discharge limit of 40°C established by PRASA. The additional discharge volume should not adversely affect NJP Insertco, nor the local wastewater treatment plant, since this volume represents less than 0.5% of the discharge originally reported to PRASA of 20,440 gallons per month (730 G.P.D.) on the Industrial Survey Questionnaire submitted back in October 1995.

Air

The evaporation process will generate water vapor which will be condensed and reused. No emissions will result from this process that could harm the environment in any way, since testing our wastewater stream in detection limits of up to 0.001 mg/L for Volatile and Semi-Volatile Organic Compounds, no traces were found⁵.

Stormwater

All equipment will be maintained inside a storage room, so no exposure to Stormwater will occur. At the same time, the Storage Room will be constructed with internal contention devices, as to retain any incidental spill of either chemicals or wastewater. NJP Insertco has its own Incidental Spill Response team and a written plan for incidental spill response together with documentation on all training sessions, all available upon request.

⁴ Calculations are included as part of Appendix C.

⁵ Beckton Laboratories results are included as part of Appendix D.

Waste Generation and Noise

Solid and Special Waste

NJP Insertco's wastewater stream has been certified as Non-Hazardous by a privately owned Analytical Laboratory. All liquid wastes are collected at NJP Insertco by private transporters contracted by BFI and disposed of at BFI's industrial cell in Ponce, Puerto Rico.

No solid wastes will be generated from this process and distillation bottoms will continue to be sent to BFI's solidification pit.

Noise

This equipment has no impact or moving operable parts. Still, NJP Insertco will keep providing all necessary and required PPE to all operators.

Noise levels are expected to remain in the vicinity of 65 to 75 db.

Social and Economical Aspects

Because of its random usage, this equipment will not require any permanent designated personnel for its operation, thus no new or further employees will be required.

Appendix A

Appendix B

Site Plan of Insertco Facility



MANUAL PNEUMATIC PUMPS

Thompson Manual Pneumatic Pumps are ideal for use either when a flow of up to 5 gpm is required or when elevating the flow as much as 12 ft.

Models A & FH with polyethylene and lead tubing. Either will accommodate all common acids and solvents. Both tubings can be adjusted to the depth of the container.

Air is supplied manually (Model A) or through the use of a bellow-type foot pedal (Model FH).

The flow can be stopped by releasing the air pressure, lifting up on the small finger release valve. The long tapered plastic plug fits openings with inside diameters from 1" to 2". This range covers most standard glass carboys and many of the other types of commonly used acid containers.

NOTE: When not in use, lift pump out and lay on its side. This removes the pump from corrosive acid fumes and also forces the ball valve to roll off its seat, preventing it from sticking.

TUBING RECOMMENDED FOR USE WITH ACID PUMPS

Polyethelene Plastic Tubing – Will satisfactorily handle all of the common acids.

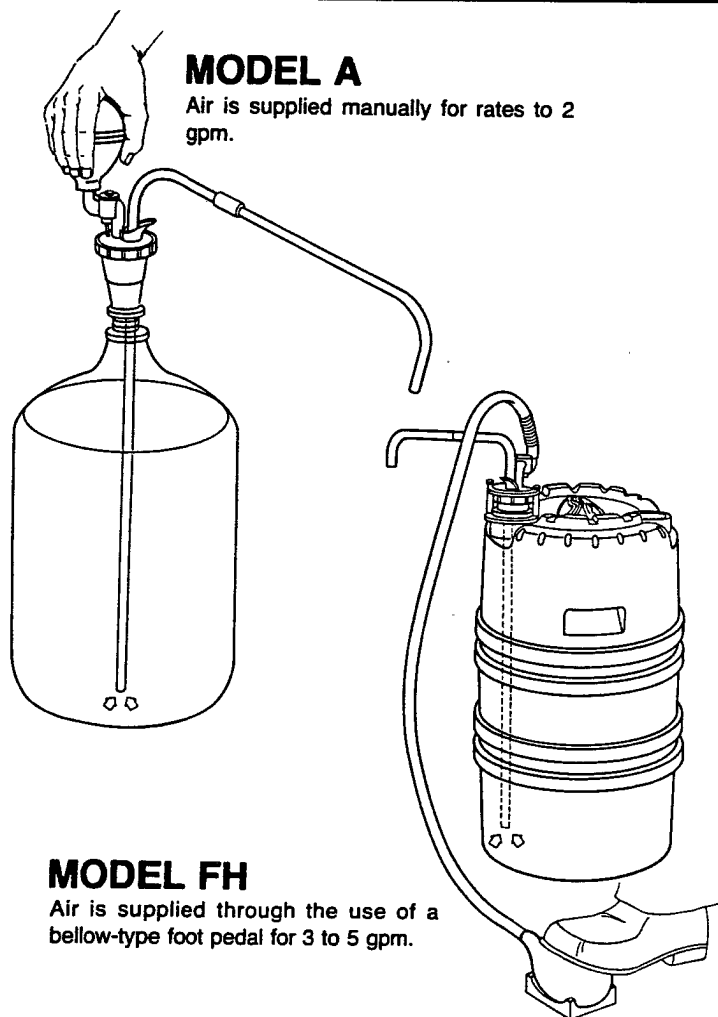
Chemical Lead Tubing – Boric, chromic, conc. nitric, phosphoric, and sulphuric acids. Bisulfates, chromates, phosphates, sulfites, and sulfates. Acetone, benzol, carbon tetrachloride, ether and phenol. Photographic solutions. Plating industry solutions.

GENERAL INFORMATION

To use in Carboy — Neck opening is larger than 2" I.D., so specify Adapter.

To use in 55 Gal. Drum — Insert the pump, fitted with Adapter, in the 2" bung opening. If the larger opening is at the top of the standing drum, an additional 10" of tubing must be specified to compensate for the extra height of this larger drum.

Additional Tube Set to be purchased. Please specify.



MODEL A

Air is supplied manually for rates to 2 gpm.

MODEL FH

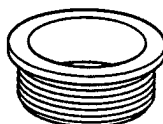
Air is supplied through the use of a bellow-type foot pedal for 3 to 5 gpm.

ADAPTERS



NO. 468 ADAPTER

Slips on over the pump or pouring spout plug to increase its diameter to 2 1/2". This is indicated when the pump is to be used in 15 gallon stainless steel nitric acid drums and most polyethelene plastic carboys.



NO. 470 ADAPTER

Screws into the opening of 55 gallon stainless steel nitric acid drums with a 2" I.P.S. opening. The pump or pouring spout is then inserted into this adapter. No. 1 Hold Down Clamp is to be ordered.



DELEWARE ADAPTER

Screws into the Delaware containers with a 2" buttress thread. The pump or pouring spout, is then inserted into the adapter. No hold down required.



DELDRUM ADAPTER

Has 2" male buttress thread. No. 1 hold down. 13-gallon to 16-gallon Deldrum - 260#. For Deldrum's and Delboy's.



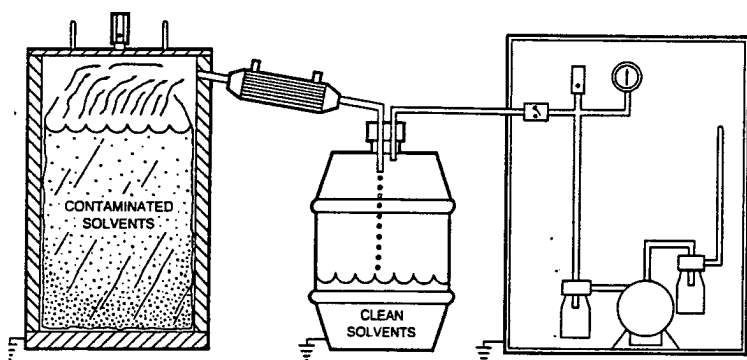
Distill solvents such as:

- MINERAL SPIRITS
- STODDARD SOLVENTS
- KEROSENE
- VARSOL
- AND MANY MORE

The LS Vacuum Series Stills expands your operating capabilities for "High Boiling Solvents".

Features:

- Distill solvents with up to 500°F boiling ranges.
- Capacities up to 55 gallons per process.
- All explosion proof, Class 1, Group D, Division 1 design.
- Achieves up to 26 inches mercury vacuum.
- Selector switch for vacuum or atmospheric operation without plumbing change.
- Vacuum control valve
- Vacuum gauge
- Fully grounded



FINISH ENGINEERING CO., INC.

921 GREENGARDEN BLVD. • ERIE, PENNSYLVANIA • USA
814/455-4478 • TWX: 510-696-6816

* Patent Pending

LS-V 1282

Appendix C

Effluent Temperature Determination

LS-55 Little Still, Finish Engineering Co.

Exit temperature for the evaporator's body cool-down water stream

Based in one hour of operation, as required by manufacturer

Volumetric flow of cooling fluid	7.000 gpm	0.016 cfs
Cooling Coil, Cu Type M Hard 3/8	0.495 ID in.	0.041 ID ft.

Water Properties @ 80°F

Density	62.220 lb/ft ³	
Viscosity	0.860 cP	2.081 lb/(ft hr)
Heat Capacity	4.18 kJ/(kg K)	0.998 BTU/(lb °F)
Thermal Conductivity	0.363 BTU/(hr ft °F)	

Water feed pipe, ½ in Sch 40 PVC	0.622 in (ID)
Velocity of cooling flow	7.582 fps

Properties of cooling coil

Velocity of cooling flow inside coil	12.118 fps
<i>Reynold's</i>	51,770 <i>Flujo Turbulento</i>
<i>Prandtl</i>	5.72
<i>Nusselt</i>	285.16 <i>Sieder & Tate</i>
Convection coefficient	<i>h</i> 2,524.71 Btu/(ft ² hr °F)

Total heat removed 214,971.47 Btu

Obtained from the "Time required for distillation" sheet)

Exit temperature of cooling stream

Heat transfer area of tank	3.792 ft ²
Time required for cooling	1.000 hr
Water feed temperature	80 °F
Temperature Gradient	22 °F

Exiting Temperature 102 °F

Evaporation System

Temperatures of streams flowing out of the condenser

Condenser is a double tube heat exchanger, with water vapor as the hot fluid on inner pipe

Volumetric flow of water vapor	4.372 gph	0.00016236 cfs
Diameter of Internal pipe (D_i)	1.500 in (ID)	Sch 80, 1½ in., steel
Flow area on internal pipe	0.0123 ft ²	

Convection coefficient of flow inside of the internal pipe

Water vapor velocity	0.013 fps	
Vapor density @ 212 °F	0.037 lb/ft ³	
Vapor viscosity @ 212 °F	0.00001202 Ns/m ²	2.91E-02 lb/(ft hr)
	0.0120 cP	
Thermal conductivity of vapor	1.43E-02 Btu/hr ft °F	
Heat capacity	0.48460000 Btu/lb °F	

Reynold's number for vapor stream	8 <i>Flujo Laminar</i>
Prandtl number for vapor stream	0.986
Nusselt number (Sieder & Tate)	0.142
<i>Internal Convection Coefficient (h_i)</i>	0.016 Btu/(hr ft ² °F)

Diameter of the outer pipe of the HX	3.150 in. (OD)
	3.000 in. (ID)

<i>Intermediate Convection Coefficient ($h_{i,o}$)</i>	0.008 Btu/(hr ft ² °F)
--	-----------------------------------

Convection Coefficient for the cooling fluid

Volumetric flow of cooling water	1.500 gpm
HX External pipe diameter	3.000 in. (ID)
Equivalent Diameter (Annulus & External)	4.500 in

Cooling fluid properties

Water Density @ 212 °F	62.220 lb/ft ³	
Viscosity @ 212 °F	0.860 cP	2.081 lb/hr ft
Thermal Conductivity	0.363 Btu/lb ft °F	
Heat Capacity	0.998 Btu/lb	

Reynold's Number for the cooling fluid	1,220 <i>Flujo Laminar</i>
Prandtl Number	5.721
Nusselt Number (Sieder & Tate)	14.221

<i>External Convection Coefficient</i>	h_o	13.766
---	-------	--------

Overall Clean Heat Transfer Coefficient (U_c)

Taking into consideration pipe wall resistance

0.0078 Btu/ft² hr °F

Temperatures of streams exiting the condenser

Massic Flow of water 748.636 lb/hr

Massic Flow of vapor 0.022 lb/hr

Length of the Heat Exchanger 1.083 ft

Feed temperatures water 80.000 °F
 vapor 212.000 °F

R value 70,080
x value 2.543

Exiting temperature of condensed fluid 131.907 °F

Exiting temperature of cooling fluid 80.001 °F

Time Required for Distillation

Time Required for Distillation

Solvent Data

Solvent Density	8.33 lbs/gal	Solvent T _{bp}	225 °F
Tank's Maximum Capacity	55.00 gal		
Pounds of Fluid in Tank	458.15 lbs	DT	145 °F

Heat Required by Solvent

Specific Heat Capacity	1.00 Btu/lb °F	Latent Heat	136,214.72 Btu/lb
Heat required by solvent	66,431.75 Btu		
Total Solvent Btu	202,646.47 Btu		

Vessel Btu

Vessel Btu	12,325.00 Btu
Heat Loss (determined by means of a graph provided by the manufacturer)	3,190.00 Btu/hr

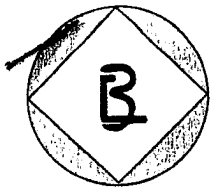
Estimated time required for the distillation

Heat Input	17,983.00 Btu input / hr
Heat Required	214,971.47 Btu total

Distillation Time (approx) 11.95 hr

Appendix D

Analytical Laboratory Results



BECKTON ENVIRONMENTAL
LABORATORIES, INC.

November 10, 1995

ANALYSIS REPORT

SAMPLE IDENTIFICATION: Residual Solución de Fuente Prensa
NJP Inserco San Germán, P.R.

Attn.: Mr. Ricardo Santana

Lab Name: Beckton Environmental Laboratories Contract: Inserco

Matrix: Water Lab. sample ID: BEL-15197

Sample wt/vol: 1000/5.0 (g/mL) mL Lab. File ID: 15197TCL

Column: (pack/cap) capillary Date Received: 10/24/95
Date Analyzed: 11/09/95 (V)
11/08/95 (SV)

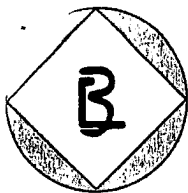
MAXIMUM CONCENTRATION OF CONTAMINANTS
FOR CHARACTERISTIC OF TCLP TOXICITY

EPA HAZARDOUS WASTE NUMBER	CONTAMINANT	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	REGULATORY LEVEL (mg/L)
METALS (SW 6000/7000)				
D004	Arsenic	N.D.	0.002	5.0
D005	Barium	0.3530	0.00009	100.0
D006	Cadmium	0.0019	0.00015	1.0
D007	Chromium	0.0195	0.0006	5.0
D008	Lead	0.0193	0.002	5.0
D009	Mercury	N.D.	0.0005	0.2
D010	Selenium	0.459	0.002	1.0
D011	Silver	N.D.	0.00075	5.0
VOLATILE ORGANICS (SW 8010; SW 8015; SW 8021)				
D018	Benzene	N.D.	.040	0.5
D019	Carbon Tetrachloride	N.D.	.040	0.5
D021	Chlorobenzene	N.D.	.040	100.0
D022	Chloroform	N.D.	.040	6.0
D027	1,4-Dichlorobenzene	N.D.	.040	7.5
D028	1,2-Dichloroethane	N.D.	.040	0.5
D029	1,1-Dichloroethylene	N.D.	.040	0.7
D035	Methyl Ethyl Ketone	N.D.	5.00	200.0
D039	Tetrachloroethylene	N.D.	.040	0.7
D040	Trichloroethylene	N.D.	.040	0.5
D043	Vinyl Chloride	N.D.	.020	0.2

N.D.- not detected

192 VILLA STREET
PONCE, P.R. 00731

TEL. (809) 841-7373
FAX (809) 841-7313



BECKTON ENVIRONMENTAL
LABORATORIES, INC.

Analysis Report
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SAMPLE IDENTIFICATION: BEL-15197

EPA HAZRDOUS WASTE NUMBER	CONTAMINANT	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	REGULATORY LEVEL (mg/L)
SEMI-VOLATILE ORGANICS (SW 8270)				
D023	o-Cresol	N.D.	.002	200.0
D024	m-Cresol	N.D.	.002	200.0
D025	p-Cresol	N.D.	.002	200.0
D030	2,4-Dinitrotoluene	N.D.	.002	0.13
D032	Hexachlorobenzene	N.D.	.002	0.13
D033	Hexachloro-1,3-butadiene	N.D.	.002	0.5 "
D034	Hexachloroethane	N.D.	.002	3.0
D036	Nitrobenzene	N.D.	.005	2.0
D037	Pentachlorophenol	N.D.	.002	100.0
D038	Pyridine	N.D.	.002	5.0
D041	2,4,5-Trichlorophenol	N.D.	.002	400.0
D042	2,4,6-Trichlorophenol	N.D.	.002	2.0

N.D.- not detected

HAZARDOUS CHARACTERISTICS

IGNIGTABILITY: Hazardous Waste Number D 001

The sample does not exhibit the characteristic of ignitability according to the U.S. Environmental Protection Agency, Manual SW 846, "Test Methods for Evaluating Solid Wastes".

Flash point > 1400 F

CORROSITIVITY: Hazardous Wastes Number D 002

The sample does not exhibit the characteristic of corrosivity according to the U.S. Environmental Protection Agency, Manual SW 846, "Test Methods for Evaluating Solid Wastes".

The pH of the sample was 8.03 S.U. @ 100C.

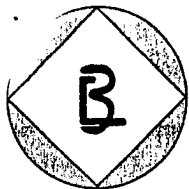
REACTIVITY: Hazardous Wastes Number D 003

Sample does not exhibit the characteristics of reactivity according to U.S. Environmental Protection Agency, Manual SW 846, "Test Methods for Evaluating Solid Wastes".

Sulfide < 10 ppm (limit 500 ppm)
Cyanide < 10 ppm (limit 250 ppm)

192 VILLA STREET
PONCE, P.R. 00731

TEL. (809) 841-7373
FAX (809) 841-7313

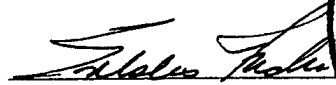


BECKTON ENVIRONMENTAL
LABORATORIES, INC.

Analysis Report
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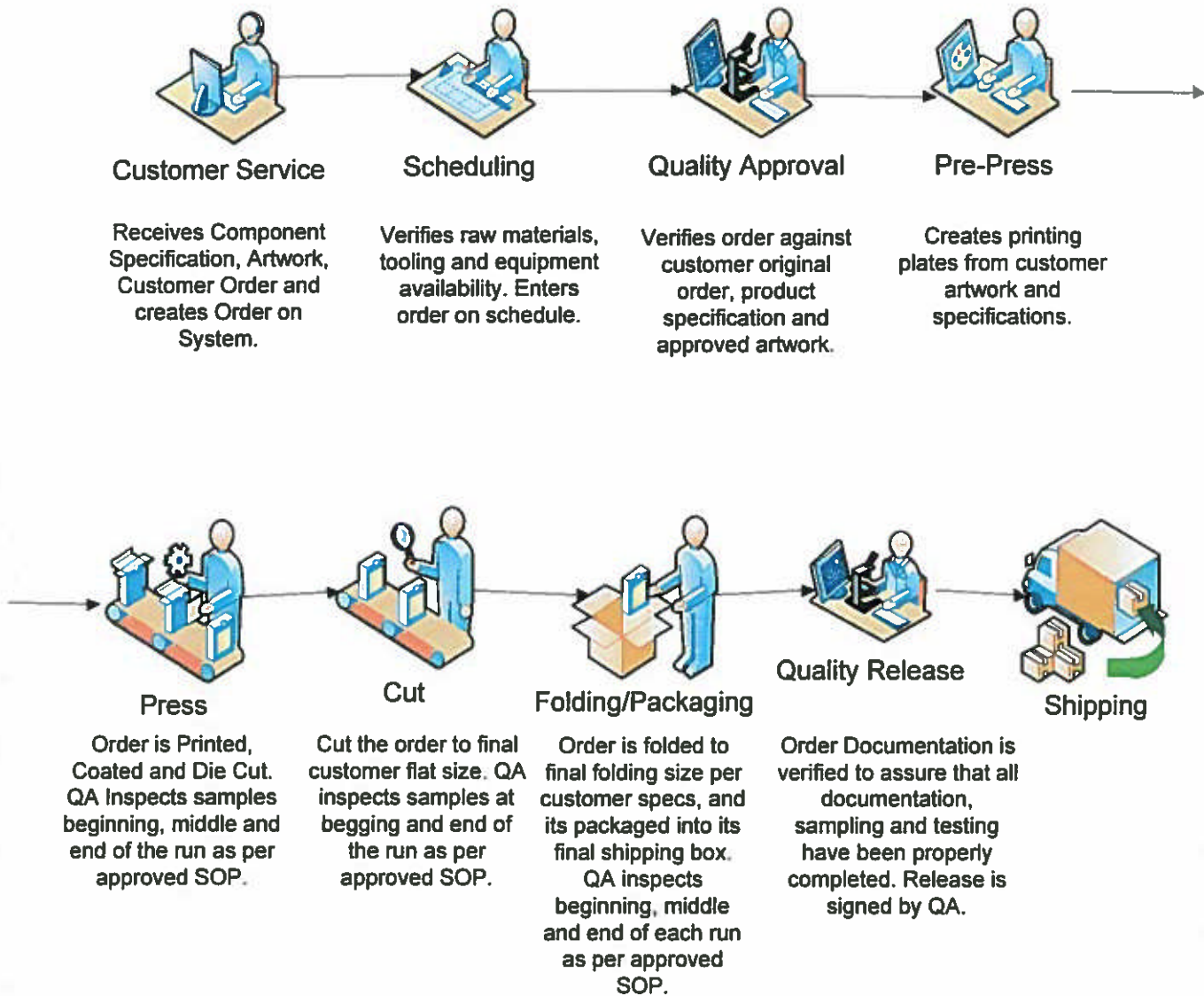
SAMPLE IDENTIFICATION: BEL-15197

Certification and release of the data contained in this Report of Analysis has been authorized by the Laboratory Manager or the Manager's Designee.


Lcda. Eulalia Medina
Chemist
Chemist License 3901



PROCESS FLOW DIAGRAM



CCL Label San German Process Flow Diagram

Reviewed by: ABC 01/17/12

Reviewed by: 2008 01/17/12



Activity by Contract and Waste Generator

Date Range: 1/26/2010 to 10/26/2015

CCL Label: 14084

Special Waste Only Detail Report

Date	Ticket	Material	Reference	Tons	Tracking QTY	Tracking UOM	Billing QTY	Billing UOM
Contract - 4217Y432706-VACUUM								
Generator: 4294 CCL INSERTCO								
			Ticket Count	15	23.54	5,106.00	5,117.20	
4/13/11	555741	FEE-HAUL/TRANS/TRUCK	MA11636/ST.6432	0.00	1.00	EA	1.00	EA
4/13/11	555741	SW-SPECIAL WASTE-LIQUID	MA11636/ST.6432	0.00	800.00	GL	800.00	GL
4/13/11	555741	SW-SPECIAL WASTE-LIQUID	MA11636/ST.6432	3.26	0.00	GL	3.26	TN
1/24/12	588257	FEE-HAUL/TRANS/TRUCK	MA.19584/ST.10896	0.00	1.00	EA	1.00	EA
1/24/12	588257	SW-SPECIAL WASTE-LIQUID	MA.19584/ST.10896	0.00	900.00	GL	900.00	GL
1/24/12	588257	SW-SPECIAL WASTE-LIQUID	MA.19584/ST.10896	3.39	0.00	GL	3.39	TN
2/8/13	629743	FEE-HAUL/TRANS/TRUCK	MA.30107/ST.15102	0.00	1.00	EA	1.00	EA
2/8/13	629743	SW-SPECIAL WASTE-LIQUID	MA.30107/ST.15102	0.00	1,000.00	GL	1,000.00	GL
2/8/13	629743	SW-SPECIAL WASTE-LIQUID	MA.30107/ST.15102	4.55	0.00	GL	4.55	TN
11/5/13	997208	FEE-HAUL/TRANS/TRUCK	MA36923/ST.17656	0.00	1.00	EA	1.00	EA
11/5/13	997208	SW-SPECIAL WASTE-LIQUID	MA36923/ST.17656	3.72	800.00	GL	800.00	GL
8/5/14	1024185	FEE-HAUL/TRANS/TRUCK	MA41979/ST.18965	0.00	1.00	EA	1.00	EA
8/5/14	1024185	SW-SPECIAL WASTE-LIQUID	MA41979/ST.18965	3.26	800.00	GL	800.00	GL
9/25/15	1063806	FEE-HAUL/TRANS/TRUCK	ma49490/st.21900	0.00	1.00	EA	1.00	EA
9/25/15	1063806	SW-SPECIAL WASTE-LIQUID	ma49490/st.21900	5.36	800.00	GL	800.00	GL
Grand Totals				15	23.54	6.00 5,100.00	6.00 5,100.00 11.20	E G T



<p>Attention All Employees!</p>
<p>As an employee, or on - site contractor, you have the right to be informed of all hazardous chemical substances to which you may be exposed in the workplace area.</p>
<p>29 CFR 1910.1200</p>



SDS INDEX

Product Name

Manufacturer

Pre- Press Area Chemicals

- | | |
|--|---------------------|
| • Fn-6 Plate Finisher Gum | ○ Fuji Film |
| • Fog Shield XP | ○ Baush & Lomb Inc. |
| • LP-D3WR Laser Plate Dev.Work.Sol.Rep. | ○ Fuji Film |
| • LP - D3W Laser Plate Dev.Working Sol'n | ○ Fuji Film |

Press Area Chemicals

- | | |
|----------------------------------|--|
| • Aeon 9000 | ○ Gardner Denver |
| • Aerosol Anti-Static Spray | ○ Varn Products |
| • Allied Orange Wash | ○ Allied Pressroom Chemistry |
| • Allied U.P.C. Plate Cleaner | ○ Allied Press Room Chemistry |
| • Permanent Blanket Repair 02290 | ○ Varn Products |
| • Enviro Blanket Restorer | ○ Lithco, Inc. |
| • Fountain Concentrate 2451 | ○ Printers Service |
| • Fount 379 | ○ Day International Chemical Products Div. |
| • IPA | ○ Day International Chemical Products Div. |



- IPA USP
- Kwik' N Easy
- LD 935
- Majesta 400
- Majesta 606
- Powdered Systems Cleaner
- Revitol 02220
- Velocity Plate Cleaner
- Wash V-120
- Plate Cleaner And Preserver
- Infinity Wash HMK-I WM
- CTP Scratch Remover
- Exxonmobil Chemical Company
- Superior Printing Inks
- Sealed Air Corporation
- Day International Chemical Products Div.
- Varn International Inc.
- Allied Pressroom Chemistry
- Varn Products
- Printers Service
- Day International Chemical Products Div.
- Tower Products, Inc.
- Tower Products, Inc.
- Tower Products, Inc.

Printing Inks

- Biolocity MT Process Colors
- Offset Precision Pantone Colors
- Offset Rotary (No Heat Web Offset)
- Offset Soy Rotary/Business Forms
- CML Oil Base Plus Colors
- PRP50005-R
- Soy Insert Dense Black
- Superior Ptinting Ink Co.
- Superior Ptinting Ink Co.
- Superior Ptinting Ink Co.
- Superior Ptinting Ink Co.
- Van Son Holland Ink Corp.
- Sun Chemical Corp.
- Sun Chemical Corp.



- Elite Precision Pantone Colors
- Relay Process Series Items
- V-THERM DK BROWN: G2983
- Intense Black S9800
- V-THERM PMS 4635-U B
- Intense Process Yellow: C235
- Intense Process Black: CD01
- Superior Printing Ink Co.
- Sun Chemical Corp.
- Sun Chemical Corp.
- Sun Chemical Corp.
- Sun Chemical Corp.
- Sun Chemical Corp.
- Sun Chemical Corp.

Folding Area Adhesives

- CLYSAR SHRINK FILMS
- Craigstik 3991 Pi
- Exifilm Plus
- Fixol-E
- HI 2198 X
- L-516 / 4 Adhesive
- L- 179
- Pr -0187-Eb
- Pr - 3755 -800
- Resin Adhesive
- Wb 0525 -800
- Wb 0571
- E.I. DuPont de Nemours & Co.
- Craig Adhesives & Coatings Co.
- Intertape Polymer Group
- Habasit Ag
- H.B. Fuller Company
- Sea Lock
- H.B. Fuller Company
- H.B Fuller Company
- H.B. Fuller Company
- Capital Adhesives
- American Chemical Inc.
- H.B. Fuller Company



- Wb 40 -5057
- 51-3053t
- American Chemical Inc
- Henkel Adhesives

GENERAL USE LUBRICANTS AND OILS

- Electrical Grade Silicone Aero
- Lps 2 Industrial Strenght Lubricant
- Mac I Multipurpose Lithium Grease
- Mobil Hydraulic Oil Aw 46
- Mobil Shc 634 Synthetic Lubrican Oil
- Crc Industries Inc.
- Lps Laboratories
- Warren Distribution Inc.
- Exxonmobil Oil Corp
- Imperial Oil (Exxonmobil)

General Use Cleaning Compounds

- Alkaless V (Alcohol Replacement)
- Ammoniated Glass Cleaner
- Damp Mop
- Eyesaline Concentrate
- Guardsman Ata Spot Remover
- Lps Mr - 650 Food Grade Mold Release
- Lps Precision Clean Ready To Use
- Lps Presolve # 1420
- Printers Service
- The Fuller Brush Company
- Spartan Chemical Company
- Fendall Inc
- Guardsman Products
- Lps Laboratories
- Lps Laboratories
- Lps Laboratories



- Lotion Soap
- Micrell Antibacterial Foam Handwash
- Nabc Urinal Screens With Deodorizing Blocks
- Purell® Instant Hand Sanitizer
- Rosin Core Solder
- Spray Buff (Non Polymer, Non Solvent)
- Super Jell Compound 8124
- Gojo Industries
- Gojo Industries
- Spartan Chemical Company
- Gojo Industries
- Bow Solder Products Co.
- National Chemical Laboratories
- Superior Printing Inks

Pre- press area Chemicals



MATERIAL SAFETY DATA SHEET

Finished Goods Catalog

55815140 - FN-6 PLATE FINISHER GUM (6X1QT)

Manufacturer Name

FUJI PHOTO FILM USA, INC.

SECTION 1 - COMPANY IDENTIFICATION

FUJI PHOTO FILM USA, INC.
200 Summit Lake Drive
Valhalla, NY 10595-1356

CHEMTREC (24 HRS) EMERGENCY NO:
Inside US & Canada: 1-800-424-9300
Outside US & Canada: 1-703-527-3887
MEDICAL (24 HRS) EMERGENCY NO:
Prostar: 1-877-935-7387
MSDS FAXBACK (24 HRS): 1-888-354-3854
NON-EMERGENCIES:
EHS Hotline: 1-800-473-3854
General Information: 1-914-789-8100

MSDS ID: 5405FF

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Wt. %	TIME WEIGHTED AVERAGES	
			OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Benzyl Alcohol	100-51-6	1-5%	NE	NE
Ethylene Glycol	107-21-1	1-5%	125 C	100 C
Gum Arabic	9000-01-5	1-5%	NE	NE
Starch Phosphate	11120-02-8	0.5-1.5%	NE	NE
Starch Derivative	9049-76-7	10-20%	NE	NE
Water	7732-18-5	60-80%	NE	NE

NE=Not Established; STEL=Short Term Exposure Limit; C=Ceiling Limits; PEL=Permissible Exposure Limits; TLV=Threshold Limit Values

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: Clear, pale yellow, aqueous liquid
Odor: No odor

CAUTION

Skin, eye, mucus membrane and respiratory tract irritant. Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

Wear equipment to protect eyes, skin and respiratory tract. Dike or absorb

FUJI PHOTO FILM USA, INC. - 55815140 - FN-6 PLATE FINISHER GUM (6X1QT)

spills to keep material and run-off from entering sewer or waterways. Use water to cool containers and disperse vapors.

Box may contain multiple containers having multiple components. Consult all MSDSs.

HMIS: Health: 1 Flammability: 0 Reactivity: 0 Protection: C
NFPA: Health: 1 Flammability: 0 Reactivity: 0 Spec. Haz.: None

Hazard Rating: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
A = Gloves B = Gloves & Goggles C = Gloves, Goggles & Apron
D = Face Shield, Gloves, Goggles & Apron

UN NO: None

DOT GUIDE: ERG Guide 111

Potential Health Effects:

Skin: Contact causes irritation.

Eyes: Causes irritation.

Inhalation: Irritant to respiratory tract and mucous membranes.

Ingestion: Ingestion of product may cause nausea and vomiting.

Conditions aggravated by exposure:

Allergic reaction to gum arabic may cause respiratory distress and sensitivity.

N

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush with COOL water for 15 minutes. Call a physician.

Skin Contact: In case of skin contact, immediately flush with cool water for 15 minutes. Call a physician.

Ingestion: In case of ingestion, seek immediate medical attention.

Inhalation: Immediately remove victim to fresh air. Call a physician for further recommendations.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: None deg F (TCC)

Autoignition Temperature: N/A deg F (CC)

Explosion Limits: Lower: N/A vol.%: Not Tested
Upper: N/A vol.%:

Extinguishing Media:

Choose extinguishing media suitable for the surrounding materials, such as water spray, dry chemical, alcohol foam or carbon dioxide.

Unsuitable Extinguishing Media:

No restrictions on media based on knowledge of this material.

Fire Fighting Instructions:

Water spray should be used to cool fire exposed containers and to disperse un-ignited vapors. Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when material has ignited or becomes involved in a fire. Try to remove material containers from fire area if can be accomplished without risk to personnel.

Evacuate area and fight fire from a safe distance. Call your local fire department. Wear positive pressure, breathing apparatus and protect eyes and skin. Use water to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Fire media run-off can damage the environment. Dike and collect media used to fight fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills:

For incidental spills and leaks, wear adequate personal protective equipment, see Section 8 (Exposure & Personal Protection). Spills should be contained by, and covered with suitable absorbent material and removed for disposal. Dispose of according to local and national regulations. Prevent from entering into soil, waterways and groundwater.

Large Spills:

For larger spills, requiring emergency response, neoprene boots and respiratory protection may also be required. Follow OSHA regulations and NIOSH recommendations for respiratory protection (see 29 CFR 1910.134 and NIOSH pub. 87-108) and emergency response (see 29 CFR 1910.120). Hold in properly labeled DOT-approved waste container. Dike large spills to minimize the spill area. Material can cause environmental damage.

SECTION 7 - HANDLING / STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Do not swallow. Wear chemical safety goggles and neoprene gloves and apron. Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Ventilation:

Good general ventilation should be sufficient for most processing operations. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Ten (10) or more room air changes per hour containing a minimum of 15% fresh air will meet these requirements. Consult ASHRAE 62-1989 for further requirements.

Personal Protective Equipment

Respiratory Protection: If used under normal operating conditions and with adequate ventilation, respiratory protection is not required. However, refer to OSHA 29 CFR 1910.13

4.

Skin Protection: Neoprene gloves and apron
Eye Protection: Chemical safety goggles

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, pale yellow, aqueous liquid

Odor: No odor

Change in Physical State:

Boiling Point: >100 deg C

Melting Point: N/D deg F

Specific Gravity: 1.10 Water=1

Vapour Pressure: ~15 mmHg @ 20C

Viscosity: N/A

Solubility in Water: Complete

pH Value: 3.0-3.4

VOC (lbs/gal): 0.29 (USEPA Method 24)

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Polymerization:

Hazardous polymerization WILL NOT occur if product is used and stored as directed. Product is stable if used and stored as directed.

Hazardous Decomposition Products:

FUJI PHOTO FILM USA, INC. - 55815140 - FN-6 PLATE FINISHER GUM (6X1QT)

Oxides of Sulfur, oxides of Carbon
Materials and Conditions to Avoid:
Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product Information
LD50 (oral, rat): >5000 mg/kg
Acute Overexposure:
Skin, eye, mucous membrane and respiratory tract irritant.
Chronic Overexposure:
No other effects besides those associated with acute exposure.
Ingredient information:
No other information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Data: No Data Available
Chemical Fate Data: No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Hazardous Waste Characteristic:
None
Recommendation:
Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Discharge of processing effluent to the sewer may require a permit. DO NOT discharge effluent solutions to septic systems.

SECTION 14 - TRANSPORTATION INFORMATION

Ground Shipping Information
Proper Shipping Name: Chemicals, N.O.I., Not D.O.T. regulated.
Hazard Class: None
UN/NA Number: None
Packing Group: None
Air (ICAO/IATA) Shipping Information
Proper Shipping Name: Chemicals, N.O.I., Not D.O.T. regulated.
Hazard Class: None
UN No: None
Packing Group: None
Subsidiary Risk: None
UN/DOT Labels Needed: None
Passenger Aircraft Packing Instructions: N/A Max: N/A
Cargo Aircraft Packing Instructions: N/A Max: N/A
International Maritime Organization (IMO) Additional Shipping Class:
IMDG Code: Not Applicable
Amdt. Code: Amdt. N/A
HTS Code: Not Applicable
Product is labeled in accordance with US D.O.T. 49 CFR.

Further information:
Please call (800) 473-3854 for further D.O.T. information.

SECTION 15 - REGULATORY INFORMATION

**Note: The ingredient information listed in this section is provided for reporting requirements as dictated by USEPA, state and local regulation. If

FUJI PHOTO FILM USA, INC. - 55815140 - FN-6 PLATE FINISHER GUM (6X1QT)

ingredient is listed in this section but not in Section 2, then the concentration of this ingredient is below de minimis (less than 0.1%).

U.S. FEDERAL REGULATIONS:

113 = SARA Title III Section 113 (40 CFR 372 -- Toxic Release Inventory)
 355 = SARA Title III Section 302 (40 CFR 355 -- Extremely Hazardous Substance)
 302 = SARA Title III Section 304 (40 CFR 302 -- Hazardous Substance List)
 CWA = Clean Water Act Priority Pollutants List
 CAA = Clean Air Act 1990 Hazardous Air Contaminants
 HAP = Clean Air Act - HON Rule - HAPs

Ingredients	CAS Number	113	355	302	CWA	CAA	HAP
Benzyl Alcohol	100-51-6	N	N	N	N	N	N
Ethylene Glycol	107-21-1	Y	N	Y	N	Y	Y
Gum Arabic	9000-01-5	N	N	N	N	N	N
Starch Phosphate	11120-02-8	N	N	N	N	N	N
Starch Derivative	9049-76-7	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

TSCA 12(b) Export Notification

CAS NUMBER	CHEMICAL NAME
107-21-1	ETHYLENE GLYCOL

TOXICITY INFORMATION:

IRC1 = IARC Group 1 Human Carcinogens List
 IRC2 = IARC Group 2 Human Carcinogens List (limited human data)
 IRC3 = IARC Group 2B Human Carcinogens List (sufficient animal data)
 NTP = NTP Known Carcinogens List
 OSHA = OSHA Known Carcinogens List

Ingredients	CAS Number	IRC1	IRC2	IRC3	NTP	OSHA
Benzyl Alcohol	100-51-6	N	N	N	N	N
Ethylene Glycol	107-21-1	N	N	N	N	N
Gum Arabic	9000-01-5	N	N	N	N	N
Starch Phosphate	11120-02-8	N	N	N	N	N
Starch Derivative	9049-76-7	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N

STATE REGULATIONS:

FL = Florida Hazardous Substance List MA = Massachusetts Right-To-Know List
 MI = Michigan Critical Materials List MN = Minnesota Hazardous Substance List
 NJ = New Jersey Right-To-Know List PA = Pennsylvania Right-To-Know List

Ingredients	CAS Number	PA	NJ	MN	MI	MA	FL
Benzyl Alcohol	100-51-6	Y	N	Y	N	Y	Y
Ethylene Glycol	107-21-1	Y	Y	Y	N	Y	Y
Gum Arabic	9000-01-5	N	Y	N	N	N	N
Starch Phosphate	11120-02-8	N	N	N	N	N	N
Starch Derivative	9049-76-7	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

The following information is required by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 or Proposition 65. This regulation does not address de minimis levels; therefore, even trace amounts of chemicals included on these lists must be noted with the "Safe Harbor" wording.

WARNING: Known to the State of California to cause cancer:

CAS NUMBER	CHEMICAL NAME
123-91-1	1,4-DIOXANE
75-21-8	ETHYLENE OXIDE

WARNING: Known to the State of California to cause developmental toxicity:

CAS NUMBER	CHEMICAL NAME
64-17-5	ETHYL ALCOHOL

WARNING: Known to the State of California to cause female reproductive effects

FUJI PHOTO FILM USA, INC. - 55815140 - FN-6 PLATE FINISHER GUM (6X1QT)

CAS NUMBER	CHEMICAL NAME
75-21-8	ETHYLENE OXIDE

WARNING: Known to the State of California to cause male reproductive effects:

****None listed****

The following designation is used only for those facilities that have air permits in nonattainment areas for ozone:

Non-Photochemically Reactive

SECTION 16 - OTHER INFORMATION

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

BAUSCH
& LOMB

MSDS4407

Fog Shield XP

MATERIAL SAFETY DATA SHEET

Effective Date: 3/14/02 Supersedes: 1/30/02

Page 1 of 6

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Fog Shield XP
Product Code: 77, 8577

For Information: 1-800-553-5340
For Emergency: 1-800-535-5053

Chemical Family: NA

Manufacturer: Bausch & Lomb Incorporated
Address: 1400 N. Goodman Street
Rochester, New York 14603

Section 2: COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	COMPONENT NAME	% W/V	OCCUPATIONAL EXPOSURE LIMITS / GUIDELINES										UNITS
			OSHA PEL TWA/STEL	ACGIH TLV TWA/STEL	NIOSH REL TWA/STEL	IRELAND TWA/STEL	HSE TWA/STEL						
67-63-0	Isopropyl Alcohol	11	400	NE	400	500	400	500	400	500	400	500	ppm
Trade Secret	Silicones	< 6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA
	Other Non-Hazardous Ingredients	> 80	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA
TOTAL		100											

N/E Not Established
TWA, 8-Hour Time-Weighted Average
N/A Not Applicable
ACGIH American Conference of Governmental Industrial Hygienists
NIOSH National Institute for Occupational Safety & Health

OSHA Occupational Safety & Health Administration
PPM Parts Per Million
STEL Short-Term Exposure Limit
C Ceiling Limit
REL Recommended Exposure Limit

Section 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear, water-like liquid. Avoid eye contact. May cause skin irritation or dryness. Ingestion may cause gastric and intestinal irritation. Seek medical attention.

Fog Shield XP

MATERIAL SAFETY DATA SHEET

Page 3 of 6

Section 4: FIRST AID MEASURES (cont.)

INHALATION:

Normal use of this product does not pose an inhalation hazard. Should respiratory tract irritation develop, discontinue use and remove to fresh air. Get medical attention if irritation or other symptoms develop or persist.

Section 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flash Point: 108°F Closed-Cup

Method: ASTM Method D3828-98

EXTINGUISHING MEDIA:

Carbon dioxide, dry chemical powder, appropriate foam or water fog.

HAZARDOUS COMBUSTION PRODUCTS:

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

As in any fire, wear self-contained breathing apparatus and full protective gear to prevent contact with skin and eyes.

Section 6: ACCIDENTAL RELEASE MEASURES

Large Spill (≥ 4 liters):

Shut off all sources of ignition. Evacuate immediate area. Isolate hazard area. Prevent from entering drains and sewers. Wear suitable protective eyewear, clothing, respiratory protection, rubber boots and rubber gloves (refer to Section 8). Cover with vermiculite or other suitable inert material, pick up and place in closed containers. Transport outdoors and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Small Spill (< 4 liters):

Isolate hazard area. Prevent from entering drains and sewers. Wear suitable protective eyewear, clothing, respiratory protection, rubber boots and rubber gloves (refer to Section 8). Cover with vermiculite or other suitable inert material, pick up and place in closed containers. Transport outdoors and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Dispose of in accordance with Section 13.

Fog Shield XP

MATERIAL SAFETY DATA SHEET

Page 5 of 6

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES:

Appearance / Physical State: Clear, water-like liquid
Odor: Slight alcohol odor

CHEMICAL PROPERTIES:

Bolling Point:	Not Determined	Melting Point:	Not Applicable
Vapor Pressure:	Not Applicable	Vapor Density:	Not Applicable
Solubility in Water:	Soluble	Specific Gravity (H2O = 1):	0.987
pH:	5-9	Freezing Point:	Not Determined
Molecular Weight:	Not Applicable, Mixture		

Section 10: STABILITY AND REACTIVITY

GENERAL:

Stable under normal conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Keep away from heat, sparks, and flames.

HAZARDOUS POLYMERIZATION:

Does not occur

HAZARDOUS DECOMPOSITION:

None

Section 11: TOXICOLOGICAL INFORMATION

RTECS No.: NT8050000

Isopropyl Alcohol

Toxicity Data:	ORL-RAT	LD50: 5045 MG/KG
	IHL-RAT	LC50: 16000 PPM/8H
	SKN-RBT	LD50: 12800 MG/KG
Irritation Data:	EYE-RBT	100 MG SEV
	SKN-RBT	500 MG (MILD)

NOTE: Only selected Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Section 12: ECOLOGICAL INFORMATION

No specific ecological data are available for this product.



MATERIAL SAFETY DATA SHEET

Finished Goods Catalog

53814060 - LP-DJNR LASER PLATE DEV. WORK. SOL. RSP. 2X2.5CAL

Manufacturer Name

FUJI PHOTO FILM USA, INC.

SECTION 1 - COMPANY IDENTIFICATION

FUJI PHOTO FILM USA, INC.
300 Summit Lake Drive
Valhalla, NY 10595-1356

CHEMTREC (24 HRS) EMERGENCY NO:
Inside US & Canada: 1-800-474-9100
Outside US & Canada: 1-701-527-1007
MEDICAL (24 HRS) EMERGENCY NO:
Prostar: 1-877-935-7387
MSDS FAXBACK (24 HRS): 1-800-354-1054
NON-EMERGENCIES:
EHS Hotline: 1-800-473-1054
General Information: 1-914-789-8100

MSDS ID: 5319PF

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Wt. %	TIME WEIGHTED AVERAGES	
			OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Polyoxyethylene Naphthylether	15543-57-4	3-7%	NE	NE
Water	7732-18-5	90-100%	NE	NE

NE=Not Established; STEL=Short Term Exposure Limit; C=Ceiling Limits; PEL=Permissible Exposure Limits; TLV=Threshold Limit Values

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: Clear, light straw, aqueous liquid

Odor: No odor

DANGER: CORROSIVE

Severe irritant to skin and eyes. May cause serious damage to eyes.
Prolonged or repeated skin contact may cause allergic reaction and dermatitis.
Keep away from excess heat. Avoid contact with strong oxidizers, strong acids
and strong bases.

Wear equipment to protect eyes, skin and respiratory tract. Dike or absorb
spills to keep material and run-off from entering sewer or waterways. Use
water to cool containers and disperse vapors.

FUJI PHOTO FILM USA, INC. - 55814040 - LP-D3WR LASER PLATE DEV. WORK. SOL. REP. 2X2.5GAL

Box may contain multiple containers having multiple components. Consult all MSDSs.

HMIS: Health: 3 Flammability: 0 Reactivity: 0 Protection: C
NFPA: Health: 3 Flammability: 0 Reactivity: 0 Spec. Haz.: CORN

Hazard Rating: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
A = Gloves B = Gloves & Goggles C = Gloves, Goggles & Apron
D = Face Shield, Gloves, Goggles & Apron

UN NO: UN1814

DOT GUIDE: ERG Guide 154

Potential Health Effects:

Skin: Contact causes severe irritation.
Eyes: May cause serious damage to eyes.
Inhalation: Severe irritant to respiratory tract and mucous membranes.
Ingestion: May cause serious damage to digestive tract.
Conditions aggravated by exposure:
None expected except those associated with acute effects.

H

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush with COOL water for 15 minutes. Call a physician.
Skin Contact: In case of skin contact, immediately flush with cool water for 15 minutes.
Call a physician.
Ingestion: In case of ingestion, seek immediate medical attention.
Inhalation: Immediately remove victim to fresh air. Call a physician for further recommendations.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: None deg F (TCC)
Autoignition Temperature: N/A deg F (CC)
Explosion Limits: Lower: N/A vol. % Not Tested
Upper: N/A vol. %

Extinguishing Media:

Choose extinguishing media suitable for the surrounding materials, such as water spray, dry chemical, alcohol foam or carbon dioxide.

Unsuitable Extinguishing Media:

No restrictions on media based on knowledge of this material.

Fire Fighting Instructions:

Water spray should be used to cool fire exposed containers and to disperse un-ignited vapors. Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when material has ignited or becomes involved in a fire. Try to remove material containers from fire area if can be accomplished without risk to personnel.

Evacuate area and fight fire from a safe distance. Call your local fire department. Wear positive pressure, breathing apparatus and protect eyes and skin. Use water to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Fire media run-off can damage the environment. Dike and collect media used to fight fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills:

For incidental spills and leaks, wear adequate personal protective equipment, see Section 8 (Exposure & Personal Protection). Spills should be contained by, and covered with suitable absorbent material and removed for

disposal. Dispose of according to local and national regulations. Prevent from entering into soil, waterways and groundwater.

Large Spills:

For larger spills, requiring emergency response, neoprene boots and respiratory protection may also be required. Follow OSHA regulations and NIOSH recommendations for respiratory protection (see 29 CFR 1910.134 and NIOSH pub. 87-108) and emergency response (see 29 CFR 1910.120). Hold in properly labeled DOT-approved waste container. Dike large spills to minimize the spill area. Material can cause environmental damage.

SECTION 7 - HANDLING / STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Do not swallow. Wear chemical safety goggles and neoprene gloves and apron. Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Ventilation:

Good general ventilation should be sufficient for most processing operations. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Ten (10) or more room air changes per hour containing a minimum of 15% fresh air will meet these requirements. Consult ASHRAE 62-1989 for further requirements.

Personal Protective Equipment

Respiratory Protection: If used under normal operating conditions and with adequate ventilation, respiratory protection is not required. However, refer to OSHA 29 CFR 1910.134.

Skin Protection:

Neoprene gloves and apron

Eye Protection:

Chemical safety goggles

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, light straw, aqueous liquid
Odor: No odor
Change in Physical State:
Boiling Point: >100 deg C
Melting Point: N/D deg F
Specific Gravity: 1.01 Water=1
Vapour Pressure: -15 mmHg @ 20C
Viscosity: N/A
Solubility in Water: Complete
pH Value: 12.9
VOC (lbs/gal): 0 (USEPA Method 16)

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Polymerization:

Hazardous polymerization WILL NOT occur if product is used and stored as directed. Product is stable if used and stored as directed.

Hazardous Decomposition Products:

Oxides of Nitrogen; Oxides of Carbon

Materials and Conditions to Avoid:

Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

FUJI PHOTO FILM USA, INC. - 55814040 - LP-D3WR LASER PLATE DEV. WORK. SOL. REP. 2X2 5GAL

U.S. FEDERAL REGULATIONS:

113 - SARA Title III Section 313 (40 CFR 372 -- Toxic Release Inventory)
 355 - SARA Title III Section 302 (40 CFR 355 -- Extremely Hazardous Substance)
 302 - SARA Title III Section 304 (40 CFR 302 -- Hazardous Substance List)
 CWA - Clean Water Act Priority Pollutants List
 CAA - Clean Air Act 1990 Hazardous Air Contaminants
 HAP - Clean Air Act - HCN Rule - HAPs

Ingredients	CAS Number	113	355	302	CWA	CAA	HAP
Polyoxyethylene Naphthylether	35545-57-4	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

TSCA 12(b) Export Notification
 None required

TOXICITY INFORMATION:

IRC1 - IARC Group 1 Human Carcinogens List
 IRC2 - IARC Group 2 Human Carcinogens List (limited human data)
 IRC3 - IARC Group 3B Human Carcinogens List (sufficient animal data)
 NTP - NTP Known Carcinogens List
 OSHA - OSHA Known Carcinogens List

Ingredients	CAS Number	IRC1	IRC2	IRC3	NTP	OSHA
Polyoxyethylene Naphthylether	35545-57-4	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N

STATE REGULATIONS:

FL - Florida Hazardous Substance List MA - Massachusetts Right-To-Know List
 MI - Michigan Critical Materials List MN - Minnesota Hazardous Substance List
 NJ - New Jersey Right-To-Know List PA - Pennsylvania Right-To-Know List

Ingredients	CAS Number	PA	NJ	MN	MI	MA	FL
Polyoxyethylene Naphthylether	35545-57-4	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

The following information is required by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 or Proposition 65. This regulation does not address de minimus levels; therefore, even trace amounts of chemicals included on these lists must be noted with the "Safe Harbor" wording.

WARNING: Known to the State of California to cause cancer:

None Listed

WARNING: Known to the State of California to cause developmental toxicity:

None Listed

WARNING: Known to the State of California to cause female reproductive effects:

None listed

WARNING: Known to the State of California to cause male reproductive effects:

None listed

The following designation is used only for those facilities that have air permits in nonattainment areas for ozone:

Non-Photochemically Reactive

SECTION 16 - OTHER INFORMATION

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product Information
LD50 (oral, rat): >2000 mg/kg
Acute Overexposure:
Severe irritant to skin and eyes. May cause serious damage to eyes.
Chronic Overexposure:
Prolonged or repeated skin contact may cause allergic reaction and dermatitis.
Ingredient information:
No other information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Data: No Data Available
Chemical Fate Data: No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Hazardous Waste Characteristic:
D003

Recommendation:

Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Discharge of processing effluent to the sewer may require a permit. DO NOT discharge effluent solutions to septic systems. Material, if spilled, may exhibit "corrosive" hazardous waste characteristics.

SECTION 14 - TRANSPORTATION INFORMATION

Ground Shipping Information

Proper Shipping Name: Potassium Hydroxide, Solution

Hazard Class: 8

UN/NA Number: UN1814

Packing Group: PGIII

Air (ICAO/IATA) Shipping Information

Proper Shipping Name: Potassium Hydroxide, Solution

Hazard Class: 8

UN No: UN1814

Packing Group: PGIII

Subsidiary Risk: None

UN/DOT Labels Needed: Corrosive

Passenger Aircraft Packing Instructions: 819 (Y819) Max: 5L (O 5L/ 1L)

Cargo Aircraft Packing Instructions: 60L Max: 820

International Maritime Organization (IMO) Additional Shipping Class:

IMDG Code: IMDG 8214

Amdt. Code: Amdt. 27-94

HTS Code: HTS81707.90.4000.8

Product is labeled in accordance with US D O T, 49 CFR

Further information:

Please call (800) 473-3854 for further D O T information.

SECTION 15 - REGULATORY INFORMATION

**Note: The ingredient information listed in this section is provided for reporting requirements as dictated by USEPA, state and local regulation. If ingredient is listed in this section but not in Section 2, then the concentration of this ingredient is below de minimis (less than 0.1%).



MATERIAL SAFETY DATA SHEET

Finished Goods Catalog

55014035 - LP-DJM LASER PLATE DEV. WORKING SOL'N (2X2.SCAL)

Manufacturer Name

FUJI PHOTO FILM USA, INC

SECTION 1 - COMPANY IDENTIFICATION

FUJI PHOTO FILM USA, INC.
300 Summit Lake Drive
Valhalla, NY 10595-1356

CHEMTREC (24 HRS) EMERGENCY NO:
Inside US & Canada: 1-800-424-9300
Outside US & Canada: 1-703-527-3887
MEDICAL (24 HRS) EMERGENCY NO:
Prosear: 1-877-935-7387
MSDS FAXBACK (24 HRS): 1-888-354-3854
NON-EMERGENCIES:
RHS Hotline: 1-800-473-3834
General Information: 1-914-789-8100

MSDS ID: 5318FF

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Wt. %	TIME WEIGHTED AVERAGES	
			OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Polyoxyethylene Naphthylether	35545-57-4	3-7%	NE	NE
Water	7732-18-5	80-100%	NE	NE

NE=Not Established; STEL=Short Term Exposure Limit; C=Ceiling Limits; PEL=Permissible Exposure Limits; TLV=Threshold Limit Values

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

.....
Appearance: Clear, light straw, aqueous liquid
Odor: No odor

WARNING: CORROSIVE

Mildly irritating to skin. Corrosive to eyes. Prolonged or repeated skin contact may cause allergic reaction and dermatitis. Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

Wear equipment to protect eyes, skin and respiratory tract. Dike or absorb spills to keep material and run-off from entering sewer or waterways. Use water to cool containers and disperse vapors.

Box may contain multiple containers having multiple components. Consult all

FUJI PHOTO FILM USA, INC. - 55814035 - LP-03W LASER PLATE DEV. WORKING SOL'N (2X2.5GAL)

MSDSs.

HMIS: Health: 2 Flammability: 0 Reactivity: 0 Protection: C
 NFPA: Health: 2 Flammability: 0 Reactivity: 0 Spec. Haz.: None

Hazard Rating: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
 A = Gloves B = Gloves & Goggles C = Gloves, Goggles & Apron
 D = Face Shield, Gloves, Goggles & Apron

UN NO: None

DOT GUIDE: ERG Guide 111

Potential Health Effects:

Skin: Contact may cause irritation.
 Eyes: May cause serious damage to eyes.
 Inhalation: Irritant to respiratory tract and mucous membranes.
 Ingestion: Ingestion of product may cause nausea and vomiting.
 Conditions aggravated by exposure:
 None expected except those associated with acute effects.
 H

SECTION 4 - FIRST AID MEASURES

Eye Contact: Immediately flush with COOL water for 15 minutes. Call a physician.
 Skin Contact: In case of skin contact; immediately flush with cool water for 15 minutes.
 Call a physician.
 Ingestion: In case of ingestion; seek immediate medical attention.
 Inhalation: Immediately remove victim to fresh air. Call a physician for further recommendations.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: None deg F (TCC)
 Autoignition Temperature: N/A deg F (CC)
 Explosion Limits: Lower: N/A vol.%; Not Tested
 Upper: N/A vol.%;

Extinguishing Media:

Choose extinguishing media suitable for the surrounding materials, such as water spray, dry chemical, alcohol foam or carbon dioxide.

Unsuitable Extinguishing Media:

No restrictions on media based on knowledge of this material.

Fire Fighting Instructions:

Water spray should be used to cool fire exposed containers and to disperse un-ignited vapors. Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when material has ignited or becomes involved in a fire. Try to remove material containers from fire area if can be accomplished without risk to personnel.

Evacuate area and fight fire from a safe distance. Call your local fire department. Wear positive pressure, breathing apparatus and protect eyes and skin. Use water to cool fire-exposed containers, to protect personnel and to disperse vapors and spills. Fire media run-off can damage the environment. Dike and collect media used to fight fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills:

For incidental spills and leaks, wear adequate personal protective equipment. See Section 8 (Exposure & Personal Protection). Spills should be contained by, and covered with suitable absorbent material and removed for disposal. Dispose of according to local and national regulations. Prevent

FUJI PHOTO FILM USA, INC. - 55814035 - LP-DJW LASER PLATE DEV. WORKING SOL'N (2X2.5GAL)

from entering into soil, waterways and groundwater.

Large Spills:

For larger spills, requiring emergency response, neoprene boots and respiratory protection may also be required. Follow OSHA regulations and NIOSH recommendations for respiratory protection (see 29 CFR 1910.134 and NIOSH pub. 87-108) and emergency response (see 29 CFR 1910.120). Hold in properly labeled DOT-approved waste container. Dike large spills to minimize the spill area. Material can cause environmental damage.

SECTION 7 - HANDLING / STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Do not swallow. Wear chemical safety goggles and neoprene gloves and apron. Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation.

Storage:

Store in a cool, dry, well-ventilated area. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Ventilation:

Good general ventilation should be sufficient for most processing operations. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Ten (10) or more room air changes per hour containing a minimum of 15% fresh air will meet these requirements. Consult ASHRAE 62-1989 for further requirements.

Personal Protective Equipment

Respiratory Protection: If used under normal operating conditions and with adequate ventilation, respiratory protection is not required. However, refer to OSHA 29 CFR 1910.134.

4.

Skin Protection: Neoprene gloves and apron
Eye Protection: Chemical safety goggles

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, light straw, aqueous liquid

Odor: No odor

Change in Physical State:

Boiling Point: >100 deg C

Melting Point: N/D deg F

Specific Gravity: 1.01 Water=1

Vapour Pressure: ~15 mmHg @ 20C

Viscosity: N/A

Solubility in Water: Complete

pH Value: 12.1

VOC (lbs/gal): 0 (USEPA Method 24)

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Polymerization:

Hazardous polymerization WILL NOT occur if product is used and stored as directed. Product is stable if used and stored as directed.

Hazardous Decomposition Products:

Oxides of Nitrogen; Oxides of Carbon

Materials and Conditions to Avoid:

Keep away from excess heat. Avoid contact with strong oxidizers, strong acids and strong bases.

FUJI PHOTO FILM USA, INC. - 55814035 - LP-D3W LASER PLATE DEV. WORKING SOL'N (2X2.5GAL)

SECTION 11 - TOXICOLOGICAL INFORMATION

Product Information
LD50 (oral, rat): >2000 mg/kg
Acute Overexposure: Mildly irritating to skin. Corrosive to eyes.
Chronic Overexposure: Prolonged or repeated skin contact may cause allergic reaction and dermatitis.
Ingredient information:
No other information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Data: No Data Available
Chemical Fate Data: No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Hazardous Waste Characteristic:
None

Recommendation:

Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Discharge of processing effluent to the sewer may require a permit. DO NOT discharge effluent solutions to septic systems.

SECTION 14 - TRANSPORTATION INFORMATION

Ground Shipping Information

Proper Shipping Name: Chemicals, N.O.I., Not D.O.T. regulated.

Hazard Class: None

UN/NA Number: None

Packing Group: None

Air (ICAO/IATA) Shipping Information

Proper Shipping Name: Chemicals, N.O.I., Not D.O.T. regulated.

Hazard Class: None

UN No: None

Packing Group: None

Subsidiary Risk: None

UN/DOT Labels Needed: None

Passenger Aircraft Packing Instructions: N/A

Max: N/A

Cargo Aircraft Packing Instructions: N/A

Max: N/A

International Maritime Organization (IMO) Additional Shipping Class:

IMDG Code: Not Applicable

Amdt. Code: Amdt. N/A

HTS Code: Not Applicable

Product is labeled in accordance with US D.O.T. 49 CFR.

Further information:

Please call (800) 473-3854 for further D.O.T. information.

SECTION 15 - REGULATORY INFORMATION

**Note: The ingredient information listed in this section is provided for reporting requirements as dictated by USEPA, state and local regulation. If ingredient is listed in this section but not in Section 2, then the concentration of this ingredient is below de minimis (less than 0.1%).

U.S. FEDERAL REGULATIONS:

313 - SARA Title III Section 313 (40 CFR 372 -- Toxic Release Inventory)

FUJI PHOTO FILM USA, INC. - 558140JS - LP-D3W LASER PLATE DEV. WORKING SOL'N (2X2.5GAL)

315 = SARA Title III Section 102 (40 CFR 315 -- Extremely Hazardous Substances)
302 = SARA Title III Section 104 (40 CFR 302 -- Hazardous Substance List)
CWA = Clean Water Act Priority Pollutants List
CAA = Clean Air Act 1990 Hazardous Air Contaminants
HAP = Clean Air Act - MCM Rule - HAPs

Ingredient	CAS Number	111	115	102	CWA	CMA	HA2
Polyoxyethylene Naphthylether	13545-57-4	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

TSCA 12(b) Export Notification
None required

TOXICITY INFORMATION:

IRCI - IARC Group 1 Human Carcinogens List
IRCI2 - IARC Group 1 Human Carcinogens List (limited human data)
IRCI3 - IARC Group 2B Human Carcinogens List (sufficient animal data)
NTP - NTP Known Carcinogens List
OSHA - OSHA Known Carcinogens List

Ingredient	CAS Number	IRCL	IRCL	IRCL	HTP	OSHA
Polycyclohexylene Naphthylether	13545-57-4	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N

STATE REGULATIONS:

FL = Florida Hazardous Substance List
 HI = Michigan Critical Materials List
 NJ = New Jersey Right-To-Know List
 MA = Massachusetts Right-To-Know List
 MN = Minnesota Hazardous Substance List
 PA = Pennsylvania Right-To-Know List

Ingredients	CAS Number	PA	NJ	MD	HI	MA	FL
Polyoxyethylene Naphthylether	15143-97-4	N	N	N	N	N	N
Water	7732-18-5	N	N	N	N	N	N

The following information is required by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 or Proposition 65. This regulation does not address de minimus levels; therefore, even trace amounts of chemicals included on these lists must be noted with the "Safe Harbor" wording.

WARNING: Known to the State of California to cause cancer.
None Listed

WARNING: Known to the State of California to cause developmental toxicity.
CAS NUMBER CHEMICAL NAME
7439-97-6 MERCURY

WARNING: Known to the State of California to cause female reproductive effects
 None listed

WARNING: Known to the State of California to cause male reproductive effects:
 None listed

The following designation is used only for those facilities that have air permits in nonattainment areas for ozone:
Non-Photochemically Reactive

SECTION 16 - OTHER INFORMATION

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Press area Chemicals

- ❖ Cleaning solvents
- ❖ Compounds
- ❖ Printing Inks
- ❖ Lubricants

Material Safety Data Sheet

[\[Home\]](#) [\[Manufacturer\]](#) [\[Part Number\]](#) [\[NSN\]](#) [\[Help\]](#)

SECTION I - Material Identity

Item Name..... ROTARY SCREW COMPRESSOR LUBRICANT &
COOLANT
Part Number/Trade Name..... AEON 9000 SP-28H109, 28H110
National Stock Number..... 9150PAEON9000SB
CAGE Code..... 66324
Part Number Indicator..... A
MSDS Number..... 181314
HAZ Code..... B

SECTION II - Manufacturer's Information

Manufacturer Name..... GARDNER DENVER
Street..... 1800 GARDNER EXPRESSWAY
City..... QUINCY
State..... IL
Country..... US
Zip Code..... 62301
Emergency Phone..... 217-222-5400

MSDS Preparer's Information

MSDS Preparer Name..... PRODUCT SPECIALIST
Date MSDS Prepared/Revised..... 00JAN97
Active Indicator..... N

Alternate Vendors

Vendor #1 CAGE..... 66324

SECTION III - Physical/Chemical Characteristics

Boiling Point..... >300 F
Vapor Pressure..... <1.0MM HG
Vapor Density..... N/A
Specific Gravity..... 1
Evaporation Rate..... N/A
Solubility in Water..... INSOLUBLE
Percent Volatiles by Volume..... 0%
Container Pressure Code..... 4
Temperature Code..... 8
Product State Code..... U

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method..... UNK
Extinguishing Media..... DRY CHEMICAL, CO2, FOAM, WATER SPRAY,
CARBON DIOXIDE
Special Fire Fighting Procedures..... ADDITION FO WATER/FOAM TO BURNING LIQUID
MAY CAUSE FROTHING.
Unusual Fire/Explosion Hazards..... CAONTAIN SPILL, COVER W/EXTINGUISHING
AGENT. USE WATER SPRAY TO CCOL FIRE-
EXPOSED CONTAINERS AND PROTECTIVE SCREEN.
DO NOT POINT SOLID WATER DIRECTLY INTO
OIL.

SECTION V - Reactivity Data

Stability..... YES
Stability Conditions to Avoid..... EXCESSIVE HEAT
Materials to Avoid..... STRONG OXIDIZING AGENTS
Hazardous Decomposition Products..... ANALOGOUS COMPOUNDS EVOLVE CO2, CO AND
OTHER UNIDENTIFIED FRAGMENTS WHEN BURNED.
Hazardous Polymerization..... NO
Polymerization Conditions to Avoid..... WILL NOT OCCUR.

SECTION VI - Health Hazard Data

Route of Entry: Skin..... YES
Route of Entry: Ingestion..... YES
Route of Entry: Inhalation..... YES
Health Hazards - Acute and Chronic..... SKIN: MILDLY IRRITATING.
PROLONGED/REPEATED CONTACT MAY CAUSE
DERMATITIS. INGEST: NAUSEA, DIARRHEA.
Symptoms of Overexposure..... SEE ABOVE
Emergency/First Aid Procedures..... SKIN: REMOVE CONTAMINATED CLOTHING, WASH
W/SOAP & WATER. EYES: COPIOUS WARM WATER
FLUSH-15 MIN. PHYSICIAN ASSESSMENT IF EYES
ENFLAMED. INHALE: EVACUATE TO FRESH AIR.
APPLY CPR IF NEEDED. ADMINISTER OXYGEN IF
AVAIL. IF CPR IS REQUIRED, PHYSICIAN
ASSESSMENT MANDATORY. INGEST: DO NOT
INDUCE VOMITING. FORCE FLUIDS, ACTIVATED
CHARCOAL TABLETS.

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled..... CONTAIN SPILL. ABSORB W/INERT ABSORBANT.
SCOOP UP USED ABSORBANT & RAGS INTO DRUMS.
Waste Disposal Method..... DISPOSE OF IN ACCORDANCE TO ALL FEDERAL,
STATE AND LOCAL LAW.
Handling and Storage Precautions..... STORE IN CCOL, WELL-VENTILATED AREA. WASH
HANDS AFTER HANDLING AND BEFORE EATING.
AVOID INHALATION AND SKIN CONTACT. LAUNDER
WORK CLOTHES FREQUENTLY.

Other Precautions..... DISCARD SATURATED LEATHER ARTICLES.

SECTION VIII - Control Measures

Respiratory Protection..... USE IN WELL VENTILATED AREA.
Ventilation..... GENERAL
Protective Gloves..... NOT REQUIRED, BUT RECOMMENDED
Eye Protection..... NONE NORMALLY REQUIRED;CHEMICAL GOGGLES
Other Protective Equipment..... OIL-RESISTANT CLOTHING IF DIRECT CONTACT
W/LIQUID LIKELY
Work Hygenic Practices..... WASH HANDS AFTER HANDLING & BEFORE EATING.
AVOID INHALATION & SKIN CONTACT. LAUNDER
WONK CLOTHES FREQUENTLY.
Supplemental Health/Safety Data..... DISCARD SATURATED LEATHER ARTICLES.
Disposal Code..... 0

SECTION IX - Label Data

Protect Eye..... NO
Protect Skin..... NO
Protect Respiratory..... NO
Chronic Indicator..... NO
Contact Code..... NONE
Fire Code..... UNKNOWN
Health Code..... UNKNOWN
React Code..... UNKNOWN

SECTION X - Transportation Data

Container Quantity..... 5
Unit of Measure..... GL

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)..... 0
Volatile Organic Compounds (G/L)..... 0

SECTION XII - Ingredients/Identity Information

Ingredient #..... 01
Ingredient Name..... SYNTHETIC HYDROCARBON/ESTER BLEND
CAS Number..... 68037014
Proprietary..... NO
Percent..... 89.9
OSHA PEL..... 5 MG/M3
ACGIH TLV..... 5 MG/M3
Ingredient #..... 02
Ingredient Name..... DEFOAMER, ANTIOXIDANTS, RUST
INHIBITORS, DYE, MFSE

CAS Number..... 7732185
Proprietary..... NO
Percent..... 10.9
OSHA PEL..... N/A
ACGIH TLV..... N/A
Recommended Limit..... NONE SPECIFIED

NOTICE: For additional information, contact BIOENVIRONMENTAL

PRODUCT NAME: AEROSOL ANTI-STATIC SPRAY
PRODUCT CODE: EXP-221

HMS CODES: H F R P
1 4 0 A

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: VARN PRODUCTS
ADDRESS: 905 SOUTH WESTWOOD, ADDISON, ILLINOIS 60101
EMERGENCY PHONE: (800) 424-9300 INFORMATION PHONE: (800) 336-8276
DATE REVISED : 04-08-93 NAME OF PREPARER : VARN PRODUCTS CO.
REASON REVISED : NEW PRODUCT INTRODUCTION

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE		WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER	mm Hg @ 70°F	mm Hg @ 68°F	
ETHANOL	64-17-5	N/E	1000 ppm		94.0	70F	10
N-PENTANE	109-66-0	400 ppm	600 ppm	750ppmSTEL	400.0	65F	35
LIQUIFIED PETROLEUM GAS	68476-85-7	1000 ppm	1000 ppm		740.0	68F	55

... No toxic chemical(s) subject to the reporting requirements of section 113 of Title III and of 40 CFR 372 are present. ...
ALL INGREDIENTS LISTED IN THE EPA TSCA INVENTORY. CONTAINS NO OZONE DEPLETING SUBSTANCES.
.. THIS PRODUCT IS CONSIDERED EXTREMELY FLAMMABLE AS DESCRIBED IN 16CFR 1500.43.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT: N/A SPECIFIC GRAVITY (H2O=1): 0.6
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: SLOWER THAN ETHER
MATERIAL V.O.C.: 4.77 LB/GL (571 G/L)
SOLUBILITY IN WATER: SLIGHT
APPEARANCE AND ODOR: AEROSOL CAN; CLEAR LIQUID - ALCOHOLIC ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: SEE ** METHOD USED: SECTION II
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.5% UPPER: 19.0%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

KEEP CONTAINERS COOL. USE SHIELDING TO PROTECT PERSONNEL AGAINST BURSTING, RUPTURING OR VENTING CONTAINERS. WATER MAY NOT BE EFFECTIVE TO EXTINGUISH FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

AT ELEVATED TEMPERATURES (OVER 130 Deg F) CONTAINERS MAY VENT, RUPTURE OR BURST.

===== SECTION V - REACTIVITY DATA =====

**STABILITY: STABLE
CONDITIONS TO AVOID**

AVOID EXCESS HEAT (ABOVE 130 Deg F).

INCOMPATIBILITY (MATERIALS TO AVOID)

AVOID MIXING WITH STRONG OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

BURNING WILL PRODUCE OXIDES OF CARBON. ADDITIONAL TOXIC CHEMICALS MAY BE FORMED IN SMALL AMOUNTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

EXCESSIVE VAPOR CONCENTRATIONS ARE ATTAINABLE. OVEREXPOSURE MAY IRRITATE THE NOSE, THROAT, LUNGS AND CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION WITH SYMPTOMS SUCH AS DROWSINESS, DIZZINESS AND UNCONSCIOUSNESS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

PROLONGED SKIN CONTACT MAY LEAD TO DRYING, IRRITATION AND DERMATITIS. EYE CONTACT MAY CAUSE BURNING AND IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

A SINGLE, PROLONGED EXPOSURE IS NOT LIKELY TO RESULT IN THE MATERIAL BEING ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

INGESTION MAY PRODUCE GASTRO-INTESTINAL IRRITATION, VOMITING AND POSSIBLE DAMAGE TO VITAL ORGANS. FOLLOW FIRST AID PROCEDURES.

HEALTH HAZARDS (ACUTE AND CHRONIC)

REPEATED OR ABUSIVE BREATHING OF CONCENTRATED VAPORS MAY EFFECT PULMONARY, CARDIOVASCULAR, CENTRAL NERVOUS SYSTEM AND CAUSE LIVER, LUNG AND KIDNEY EFFECTS. REPEATED SKIN CONTACT WILL DRY OUT AND CRACK SKIN.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

SKIN CONTACT MAY AGGRAVATE PRE-EXISTING DERMATITIS. INHALATION MAY AGGRAVATE PRE-EXISTING ASTHMA-LIKE CONDITIONS.

EMERGENCY AND FIRST AID PROCEDURES

EYES: HOLD EYELID OPEN AND FLUSH WITH WATER FOR 15 MINUTES. CONTACT A PHYSICIAN IF IRRITATION PERSISTS. SKIN: WASH WITH SOAP AND WATER. INGESTION: CONTACT LOCAL POISON CONTROL CENTER OR PHYSICIAN IMMEDIATELY. INHALATION: MOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS LABORED.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

ELIMINATE ALL IGNITION SOURCES. SOAK UP MATERIAL WITH ABSORBANT. TRANSFER INTO A CLOSED CONTAINER FOR LATER DISPOSAL. AEROSOL PROPELLENTS ARE EXTREMELY FLAMMABLE.

WASTE DISPOSAL METHOD

DO NOT PUNCTURE OR INCINERATE. WHEN CONTENTS ARE DEPLETED CONTINUE TO DEPRESS BUTTON UNTIL ALL GAS IS EXPELLED. DISPOSE OF CONTAINERS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. CONTACT A LICENSED HAZARDOUS WASTE HAULER FOR MORE INFORMATION.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

KEEP AWAY FROM SUNLIGHT, EXCESS HEAT, AND SOURCES OF IGNITION. STORE AT TEMPERATURE BELOW 130 Deg F. STORE AS A LEVEL 3 AEROSOL (NFPA 308). AVOID SKIN CONTACT. AVOID BREATHING VAPORS.

OTHER PRECAUTIONS

WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT AND KEEP AWAY FROM SPARKS, FLAMES AND OTHER SOURCES OF IGNITION.

CONTAINS NO CHEMICALS FOUND ON THE CALIFORNIA PROPOSITION 65 LIST.

FOR AIR SHIPMENT: PROPER SHIPPING NAME: AEROSOL, UN NUMBER: UN1950, HAZARD CLASS: 2.1

FOR SURFACE SHIPMENT: PROPER SHIPPING NAME: CONSUMER COMMODITY, HAZARD CLASS: ORM-D

===== SECTION VIII - CONTROL MEASURES =====**RESPIRATORY PROTECTION**

WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS IN SECTION II, USE A RESPIRATOR WITH APPROPRIATE ORGANIC VAPOR CARTRIDGES (NIOSH APPROVED).

VENTILATION

IF CURRENT VENTILATION IS INADEQUATE TO MAINTAIN CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS IN SECTION II, ADDITIONAL VENTILATION OR EXHAUST SYSTEM IS REQUIRED. EXPLOSION PROOF ELECTRICAL SYSTEMS MUST BE USED.

PROTECTIVE GLOVES

FOR BRIEF CONTACT, NO PRECAUTIONS SHOULD BE NEEDED.

EYE PROTECTION

SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

WEAR IMPERVIOUS CLOTHING TO PREVENT SKIN CONTACT.

WORK/HYGIENIC PRACTICES

WASH WITH SOAP AND WATER AFTER PRODUCT CONTACT WITH SKIN.

===== SECTION IX - DISCLAIMER =====**DISCLAIMER**

THE INFORMATION ON THIS MSDS IS BELIEVED TO BE ACCURATE AS OF THE DATE SHOWN IN SECTION I. SINCE THE USE OF THIS PRODUCT IS NOT IN THE CONTROL OF VARN, IT IS THE USER'S RESPONSIBILITY TO DETERMINE WHAT CONSTITUTES SAFE USAGE FOR A PARTICULAR PRODUCT. THIS FORM MAY BE REPRODUCED IN QUANTITIES NECESSARY TO MEET YOUR REQUIREMENTS.



ALLIED PRESSROOM CHEMISTRY MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : **ALLIED ORANGE WASH**

(Blanket and Roller wash for lithographic presses)

MANUFACTURER'S NAME **ALLIED PRESSROOM CHEMISTRY**

STREET ADDRESS

2040 LEE STREET, HOLLYWOOD, FLORIDA, 33020, USA

OFFICE TELEPHONE
800-327-8487

FAX
954-923-6462

24 HR EMERGENCY TELEPHONE
800-424-9300 CHEMTREC

THIS IS AN INDUSTRIAL CHEMICAL PRODUCT. ALL INDUSTRIAL CHEMICAL PRODUCTS POSE AN INHERENT HEALTH RISK. BEFORE USE ALWAYS READ COMPLETE LABEL AND MSDS FOR SAFE HANDLING PROCEDURES

0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe

HEALTH HAZARD: 1

FIRE HAZARD: 2

REACTIVITY: 0

PROTECTIVE EQUIPMENT: C



Safety
Glasses



Gloves



Protective
Apron

DO NOT BREATHE VAPORS. DO NOT GET IN EYES, SKIN. DO NOT GET ON CLOTHING. DO NOT INGEST

SECTION 2 - INGREDIENT INFORMATION

INGREDIENTS	%	CAS NUMBER	HAZARD DATA
<small>*These ingredients are subject to the reporting requirements of SARA 313 and 302 CFR 312</small>			
Aliphatic petroleum distillates	90 - 95	64742-47-8	ACGIH (TWA-TLV) 100ppm
Dipropylene Glycol Methyl Ether *	0 - 5	34590-94-8	ACGIH (TWA-TLV) 100 ppm Skin

ALL INGREDIENTS ARE LISTED IN THE US TOXIC SUBSTANCE CONTROL ACT (TSCA)

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOR AND APPEARANCE Clear orange liquid, hydrocarbon odor	WATER SOLUBILITY Emulsifiable	PH Not applicable	SPECIFIC GRAVITY 0.8
VAPOR PRESSURE (MM Hg) <3.0 @ 20°C	VAPOR DENSITY (AIR=1) >1	EVAPORATION RATE (Butyl acetate = 1) <1	BOILING POINT (°F) 307 - 398	V.O.C.'s 97% by Mass 6.5 lb per Gallon (776 g/l)

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES ■ NO □		IF YES, UNDER WHICH CONDITIONS? • Excess heat, sparks and open flame.	
EXTINGUISHING MEDIA CARBON DIOXIDE, DRY CHEMICAL, UNIVERSAL FOAM.		SPECIAL FIRE FIGHTING PROCEDURES. Use self contained breathing apparatus.	
FLASHPOINT (°F) AND METHOD 145 F by TCC		UPPER FLAMMABLE LIMIT (% BY VOLUME) : Unknown	LOWER FLAMMABLE LIMIT (% BY VOLUME) : Unknown
AUTOIGNITION TEMPERATURE (°C) Not known		HAZARDOUS COMBUSTION PRODUCTS Oxides of carbon and hydrocarbons.	
EXPLOSION DATA • NOT KNOWN		SENSITIVITY TO IMPACT - NO	SENSITIVITY TO STATIC DISCHARGE NO

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES ■ NO □	CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERISATION None	
INCOMPATIBILITY WITH OTHER SUBSTANCES Strong oxidizing agents, strong reducing agents, strong bases		
HAZARDOUS DECOMPOSITION PRODUCTS: In contact with open flame or incandescent material will liberate carbon dioxide, carbon monoxide and hydrocarbons		This product is not photochemically reactive



ALLIED PRESSROOM CHEMISTRY MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER • ALLIED ORANGE WASH

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY

SKIN CONTACT ■

SKIN ABSORPTION ■

EYE CONTACT ■

INHALATION ■

INGESTION ■

ACUTE EXPOSURE TO PRODUCT: Inhalation - Inhalation can cause severe irritation of the respiratory tract, signs of central nervous system depression, dizziness nausea and headache. Eye - Will cause severe irritation, burning, redness and tearing. Skin - Can cause irritation, redness burning and drying. Ingestion causes irritation of the digestive tract. Aspiration into the lungs can lead to pulmonary edema and chemical pneumonia which can prove fatal. Prolonged over-exposure can lead to narcosis, respiratory failure, coma.

CHRONIC EXPOSURE TO PRODUCT: Prolonged skin contact may aggravate an existing dermatitis. Prolonged and repeated exposure to the pure solvent contained in this product has been reported to cause permanent brain and central nervous system damage.

CARCINOGENICITY: No ingredient has been identified as carcinogenic or potentially carcinogenic by IARC, NTP, OSHA

TARGET ORGAN EFFECTS: Eyes, skin irritation

EMERGENCY FIRST AID PROCEDURES:

EYES: Flush with running water for at least 15 minutes. Seek medical attention.

SKIN: wash affected area with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: Remove victim to fresh air. Administer oxygen and/or artificial respiration if breathing difficulties occur. Seek medical attention.

INGESTION: Do not induce vomiting. Material is an aspiration hazard, may enter lungs and cause lung damage. Seek immediate medical attention.

SECTION 7 - PREVENTATIVE MEASURES

GLOVES

Nitrile for incidental, non-immersion contact.

RESPIRATOR: Use NIOSH approved SCBA in emergency situations or confined areas.

EYE (SPECIFY)

Splash proof goggles or face shield

CLOTHING: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact.

ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS): Use local exhaust or dilution ventilation as appropriate to control exposure below permissible levels. Vapors are heavier than air and will collect in low areas

LEAK AND SPILL PROCEDURE: Extinguish all sources of ignition. Provide maximum ventilation. Dike area to contain spill. Take precautions to prevent contamination of ground and surface waters. Recover spilled material using absorbent material such as vermiculite and sweep into closed containers for disposal.

WASTE DISPOSAL: Contaminated vermiculite or porous surface must be disposed of in a permitted hazardous waste facility. Recovered liquids may be reprocessed or incinerated in a permitted hazardous waste facility. In all cases material should be disposed of in accordance with all applicable regulations.

HANDLING PROCEDURES AND EQUIPMENT: Keep container closed when not in use. Store only in closed, properly labeled containers. Store as COMBUSTIBLE LIQUID. Store in a cool, dry, well ventilated area away from heat sparks and open flames. Treat empty containers as containing hazardous residues.

ADDITIONAL INFORMATION

CALIFORNIA PROPOSITION 65: This regulation does not address "de minimis" levels. Therefore even trace amounts of chemicals on these lists must be identified. Trace quantities refer low levels of materials whose exact concentrations may not always be determined because of their minuteness.

This product contains the following chemicals known by the state of California to cause cancer : None

This product contains following chemicals known by the state of California to cause reproductive harm : None

SHIPPING INFORMATION: For bulk domestic shipment: Combustible liquids, NOS (petroleum Distillates), Combustible Liquid, NA 193, PG III.

SECTION 9 - PREPARATION AND DATE OF MSDS

PREPARED BY (GROUP DEPARTMENT, ETC.)

ALLIED PRESSROOM CHEMISTRY TECHNICAL SERVICES DEPARTMENT

PHONE NUMBER

1-800-327-8487

DATE

May 2005

The above information is believed to be correct as of the date hereof and is based on data supplied by raw material suppliers, however, no warranty of merchantability, fitness for use, or any other warranty is expressed or is to be implied regarding the accuracy of these data, the results to be obtained from the use of the material, or the hazards connected with each use. Since the information contained herein may be applied under conditions beyond our control and with which we are unfamiliar, and since the data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its use. This information is furnished on the condition that the person receiving it shall make his own determination as to the suitability of the material for his particular purpose and on the condition that he



ALLIED ORANGE WASH

For Automatic Wash Up Systems

10097

While *Orange Wash* is made for automatic wash up systems, it is a premium blanket and roller wash ~~for all applications. *Orange Wash* lifts and removes inks and other contaminants quickly from~~ blankets and rollers. This is a low odor wash, which up to 50% water can be added for conventional use (by hand)

ADVANTAGES

- WORLD WIDE FOGRA APPROVAL (automatic wash systems)
- Cleans quickly.
- Low odor.
- Up to 50% water can be added for conventional use

RECOMMENDATIONS FOR USE

Automatic Wash Systems:- use as you would any other automatic blanket wash OR Add 10% to 50% water into *Orange Wash* in a wash up bottle.

Roller Wash:- pour a liberal amount over inking rollers adding more if necessary, engage wash-up attachment.

Blanket Wash:- pour a liberal amount onto a clean shop towel. Wipe entire blanket with a side-to-side motion.

Chemistry, Integrated Equipment and Specialty Products for the Pressroom

2040 Lee Street / Hollywood, FL 33020 / 800-327-8487 / Fax: 954-923-6462
3546 Emery Street Los Angeles, CA 90023 / 800-272-8397 / Fax: 323-266-4382
www.alliedchem.com



ALLIED PRESSROOM CHEMISTRY MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: **ALLIED U.P.C. PLATE CLEANER**
(Plate Cleaner for lithographic presses)

MANUFACTURER'S NAME: ALLIED PRESSROOM CHEMISTRY.

STREET ADDRESS
2040 LEE STREET, HOLLYWOOD, FLORIDA, 33020, USA

OFFICE TELEPHONE
800-327-8467

FAX
954-923-8462

24 HR. EMERGENCY TELEPHONE
800-424-9300 CHEMTREC

THIS IS AN INDUSTRIAL CHEMICAL PRODUCT. ALL INDUSTRIAL CHEMICAL PRODUCTS POSE AN INHERENT HEALTH RISK. BEFORE USE ALWAYS READ COMPLETE LABEL AND MSDS FOR SAFE HANDLING PROCEDURES

0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe
HEALTH HAZARD: 2
FIRE HAZARD: 2
REACTIVITY: 0
PROTECTIVE EQUIPMENT: C



Safety
Glasses



Gloves



Protective
Apron

DO NOT BREATHE VAPORS. DO NOT GET IN EYES,
SKIN. DO NOT GET ON CLOTHING. DO NOT INGEST

SECTION 2 - INGREDIENT INFORMATION

INGREDIENTS	%	CAS NUMBER	HAZARD DATA
<small>*These ingredients are subject to the reporting requirements of SARA 313 and 40 CFR 172</small>			
Aliphatic petroleum distillates	45	64741-41-9	ACGIH (TWA-TLV) 100ppm
Aromatic petroleum distillates	18	64742-95-6	ACGIH (TWA-TLV) 100ppm
<i>This ingredient contains approximately:</i> Xylene* 2-5% cas#1330-20-7 OSHA PEL-100ppm., Cumene* 1-4% cas#98-82-8 OSHA PEL 50 ppm., Trimethylbenzenes* 30-50% cas#25551-13-7 No exposure levels established; Diethylbenzene 1-5 % cas#25340-17-4 No exposure levels established; Ethylbenzene* 0-0.3% cas#100-41-4 OSHA PEL 100 ppm			
Phosphoric Acid *	4	7664-38-2	ACGIH (TWA-TLV) - 1 mg/m3

ALL INGREDIENTS ARE LISTED IN THE US TOXIC SUBSTANCE CONTROL ACT (TSCA)

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE VISCIOUS LIQUID	ODOR AND APPEARANCE Thick, purple emulsion hydrocarbon odor	WATER SOLUBILITY Miscible	PH 2	SPECIFIC GRAVITY 0.92
VAPOR PRESSURE (MM Hg) of VOC materials <3.0 @ 20°C	VAPOR DENSITY (AIR=1) >1	EVAPORATION RATE (Butyl acetate = 1) <1	BOILING POINT (°F) 212 initial	V.O.C.'s 54 % by Mass 4.1 lb per Gallon (488 g/l)

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	IF YES, UNDER WHICH CONDITIONS? • Excess heat, sparks and open flame.		
EXTINGUISHING MEDIA CARBON DIOXIDE, DRY CHEMICAL, UNIVERSAL FOAM.		SPECIAL FIRE FIGHTING PROCEDURES: Use self contained breathing apparatus.	
FLASH POINT (°F) AND METHOD 107 by TCC		UPPER FLAMMABLE LIMIT (% BY VOLUME): Unknown	LOWER FLAMMABLE LIMIT (% BY VOLUME): Unknown
AUTOIGNITION TEMPERATURE (°C)	HAZARDOUS COMBUSTION PRODUCTS Oxides of carbon and hydrocarbons.		
EXPLOSION DATA • NOT KNOWN	SENSITIVITY TO IMPACT NO	SENSITIVITY TO STATIC DISCHARGE NO	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERISATION None	
INCOMPATIBILITY WITH OTHER SUBSTANCES Strong oxidizing agents, strong reducing agents, strong bases		
HAZARDOUS DECOMPOSITION PRODUCTS: In contact with open flame or incandescent material will liberate carbon dioxide, carbon monoxide and hydrocarbons		This product is photochemically reactive



ALLIED PRESSROOM CHEMISTRY MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER • ALLIED U.P.C. PLATE CLEANER

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY

SKIN CONTACT ■

SKIN ABSORPTION ■

EYE CONTACT ■

INHALATION ■

INGESTION ■

ACUTE EXPOSURE TO PRODUCT: Inhalation - Inhalation can cause severe irritation of the respiratory tract, signs of central nervous system depression, dizziness nausea and headache. Eye - Will cause severe irritation, burning, redness and tearing. Skin - Can cause irritation, redness burning and drying. Ingestion causes irritation of the digestive tract. Aspiration into the lungs can lead to pulmonary edema and chemical pneumonia which can prove fatal. Prolonged over-exposure can lead to narcosis, respiratory failure, coma.

CHRONIC EXPOSURE TO PRODUCT: Prolonged skin contact may aggravate an existing dermatitis. Prolonged and repeated exposure to the pure solvent contained in this product has been reported to cause permanent brain and central nervous system damage.

CARCINOGENICITY Ethylbenzene cas#100-41-4 present at less than 0.05% is listed as IARC Group 2B - a possible human carcinogen.

TARGET ORGAN EFFECTS Over-exposure has been linked to blood, liver and kidney abnormalities in animal studies. Has been linked to birth defects in animal studies, may harm fetus at exposure levels harmful to mother.

EMERGENCY FIRST AID PROCEDURES:

EYES: Flush with running water for at least 15 minutes. Seek medical attention.

SKIN: wash affected area with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: Remove victim to fresh air. Administer oxygen and/or artificial respiration if breathing difficulties occur. Seek medical attention.

INGESTION: Do not induce vomiting. Material is an aspiration hazard, may enter lungs and cause lung damage. Seek immediate medical attention.

SECTION 7 - PREVENTATIVE MEASURES

GLOVES

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RESPIRATOR: Use NIOSH approved SCBA in emergency situations or confined areas.

EYE (SPECIFY)

Splash proof goggles or face shield

CLOTHING: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact.

ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS): Use local exhaust or dilution ventilation as appropriate to control exposure below permissible levels. Vapors are heavier than air and will collect in low areas.

LEAK AND SPILL PROCEDURE: Extinguish all sources of ignition. Provide maximum ventilation. Dike area to contain spill. Take precautions to prevent contamination of ground and surface waters. Recover spilled material using absorbent material such as vermiculite and sweep into closed containers for disposal.

WASTE DISPOSAL: Contaminated vermiculite or porous surface must be disposed of in a permitted hazardous waste facility. Recovered liquids may be reprocessed or incinerated in a permitted hazardous waste facility. In all cases material should be disposed of in accordance with all applicable regulations.

HANDLING PROCEDURES AND EQUIPMENT: Keep container closed when not in use. Store only in closed, properly labeled containers. Store as COMBUSTIBLE LIQUID. Store in a cool, dry, well ventilated area away from heat sparks and open flames. Treat empty containers as containing hazardous residues.

ADDITIONAL INFORMATION

CALIFORNIA PROPOSITION 65: This regulation does not address "de minimis" levels. Therefore even trace amounts of chemicals on these lists must be identified. Trace quantities refer to levels of materials whose exact concentrations may not always be determined because of their minuteness.

This product contains the following chemicals known by the state of California to cause cancer: benzene, dioxane, ethylene oxide, acetaldehyde. This product contains following chemicals known by the state of California to cause reproductive harm: benzene, toluene, ethylene oxide.

SHIPPING INFORMATION: Not regulated for ground domestic transportation in non-bulk quantities.

For export and air shipment. Flammable liquids, NOS (petroleum distillates), 3, UN 1993, PG III

SECTION 9 - PREPARATION AND DATE OF MSDS

PREPARED BY (GROUP DEPARTMENT, ETC.)

ALLIED PRESSROOM CHEMISTRY TECHNICAL SERVICES DEPARTMENT

PHONE NUMBER

1-800-327-8487

DATE

May 2007

The above information is believed to be correct as of the date hereof and is based on data supplied by raw material suppliers, however, no warranty of merchantability, fitness for use, or any other warranty is expressed or is to be implied regarding the accuracy of these data, the results to be obtained from the use of the material, or the hazards connected with each use. Since the information contained herein may be applied under conditions beyond our control and with which we are unfamiliar, and since the data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its use. This information is furnished on the condition that the person receiving it shall make his own determination as to the suitability of the material for his particular purpose and on the condition that he assume risk of his use thereof.

Material Safety Data Sheet

MSDS: 11956 - PERMANENT BLANKET REPAIR 0229J

Plant #: 404 Interior

Status: Pending

Formula: NOT GIVEN

Specification: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

VARN PRODUCTS

905 S. WESTWOOD

ADDISON, IL 60101

Phone: 800-236-8276

Emergency:

Supplier

VARN PRODUCTS

905 S. WESTWOOD

ADDISON, IL 60101

Phone: 800-236-8276

Emergency:

Physical/Chemical Characteristics

Boiling Point: GT 212 F

Melting Point: NG

Freezing Point: NG

Pour Point: NG

Softening Point: NG

Specific Gravity: EQ 0.1

Vapor Pressure: NG

Vapor Density: NA

Percent Volatiles: NG

Evaporation Rate: LT 1

ETBE = 1, LOWER.

pH: NG

Molecular Weight: NG

Viscosity: NG

Solubility in Water ...: 100%.

Odor/Appearance/Other Characteristics:

STRAW COLORED LIQUID . MILD ODOR . MATERIAL VOC: N/A.

Fire and Explosion Data

Closed Cup Flash Pt. ..: NG

NONE.

Open Cup Flash Point ..: NG

NONE.

Fire Point: NG

Auto Ignition: NG

Lower Explosion Limit : NA

Upper Explosion Limit : NA

Shipping Regulations

UN/NA Number: NG

DOT Hazard Class: N/A

Shipping Label: NOT GIVEN

Shipping Name: NOT REGULATED

Material Safety Data Sheet

MSDS 11331

MSDS: 11331 - PERMANENT BLANKET REPAIR

Plant #: 40, Inset: 1

Prepared

Preparer's Name & Title: VARN PRODUCTS CO.

Preparation Date: 10/16/92

Component(s):

PERMANENT BLANKET REPAIR

OSHA PEL: NG ppm NG mg/m3

ACGIH TLV: NG ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: NG

CAS No.: NOT GIVEN

Text Section(s)

MANUFACTURER IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

PRODUCT NAME: PERMANENT BLANKET REPAIR

PRODUCT CODE: 02173

HMIS CODES: H - 1 F - 1 R - 0 P - A

EMERGENCY PHONE: (300) 424-9300

INFORMATION PHONE: (800) 336-8276

MANUFACTURER'S NAME & ADDRESS:

VARN PRODUCTS
905 SOUTH WESTWOOD
ADDISON, ILLINOIS 60101

HAZARDOUS INGREDIENTS/SARA III INFORMATION

SEE COMPONENT PAGE(S) FOR ADDITIONAL INFORMATION.

NO REPORTABLE QUANTITIES OF HAZARDOUS INGREDIENTS ARE PRESENT

No toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372 are present.

Material Safety Data Sheet

MSDS: 11956

MSDS: 11956 - PERMANENT BLANKET FLPAIR 02250

Plant #: 404 Inserted ===== Page 2

ALL INGREDIENTS ARE LISTED IN THE EPA TSCA LISTING.

PHYSICAL/CHEMICAL CHARACTERISTICS

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FIRE AND EXPLOSION HAZARD DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES: AS IN ANY FIRE, WEAR SELF CONTAINED BREATHING APPARATUS (MSHA/NIOSH APPROVED) AND FULL PROTECTIVE GEAR.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID CONDITIONS OF EXCESSIVE HEAT TO INCREASE SHELF LIFE.

INCOMPATIBILITY (MATERIALS TO AVOID): AVOID STRONG OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: NONE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: NO HAZARD IN NORMAL INDUSTRIAL USE.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: PROLONGED OR REPEATED CONTACT WITH SKIN MAY CAUSE IRRITATION. CONTACT MAY CAUSE EYE IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: THIS PRODUCT IS NOT CONSIDERED TO BE TOXIC THROUGH SKIN ABSORPTION.

Figure 1. The effect of the concentration of the *Agaricus bisporus* spores on the growth of *Agaricus bisporus* on the substrate.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

INGESTION HEALTH RISK AND SYMPTOMS OF EXPOSURE: EYE IRRITATION, NAUSEA, VOMITING, MODERATE GASTRO-INTESTINAL IRRITATION, AND LETHARGY. FOLLOW FIRST AID PROCEDURES.

HEALTH HAZARDS (ACUTE AND CHRONIC): THIS PRODUCT MAY PRODUCE MILD TO MODERATE IRRITATION UPON CONTACT WITH EYES AND MILD IRRITATION WITH SKIN. NO CHRONIC EFFECTS ARE KNOWN OR EXPECTED.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS.

NTP: NO

IARC MONOGRAPHS: NO

TARC MONOGRAPHED: NO
OSHA REGULATED: NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH WATER FOR 15 MINUTES. SEE MEDICAL ATTENTION IF IRRITATION PERSISTS.

SKIN: WASH WITH SOAP AND WATER.

INHALATION: MOVE TO FRESH AIR.

INGESTION: IF VICTIM IS CONSCIOUS, INDUCE VOMITING AS DIRECTED BY MEDICAL PERSONNEL. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SOAK UP ON
ABSORBENT MATERIAL. DISPOSE INTO NON-HAZARDOUS REFUSE. WASH RESIDUE WITH
SOAP AND WATER.

WASTE DISPOSAL METHOD: THIS PRODUCT, AS RECEIVED, MAY MEET THE SEWER DISPOSAL GUIDELINES IN MANY MUNICIPALITIES. CHECK WITH LOCAL SEWER AUTHORITIES BEFORE DISPOSING OF PRODUCT.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE IN A COOL, DRY AREA AWAY FROM SUNLIGHT AND EXCESS HEAT. KEEP FROM FREEZING.

OTHER PRECAUTIONS: WHEN TRANSFERRING OR USING THIS PRODUCT, WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT.

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MSDS: 11956 - PERMANENT BLANKET REPAIR 02200

Plant #: 404 Insertion ~~REPAIR~~ ***** Page 5

CONTAINS NO CHEMICALS FOUND ON THE CALIFORNIA PROPOSITION 65 LIST.

PROPER SHIPPING NAME: NOT REGULATED, HAZARD CLASS: N/A, UN NUMBER: N/A,
PACKING GROUP: N/A

CONTROL MEASURES

RESPIRATORY PROTECTION: NO SPECIAL PROTECTION REQUIRED.

VENTILATION: NO SPECIAL VENTILATION REQUIRED.

PROTECTIVE GLOVES: NOT REQUIRED UNDER NORMAL CONDITIONS OF USE.

EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: NOT NECESSARY.

WORK/HYGIENIC PRACTICES: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT.

SPECIAL NOTES

DISCLAIMER: THE INFORMATION ON THIS MSDS IS ACCURATE AS OF THE DATE SHOWN IN THE DATA PAGES. SINCE THE USE OF THIS PRODUCT IS NOT IN THE CONTROL OF VARN, IT IS THE USER'S RESPONSIBILITY TO DETERMINE WHAT CONSTITUTES SAFE USAGE FOR A PARTICULAR PURPOSE. THIS FORM MAY BE REPRODUCED LOCALLY IN ANY QUANTITIES NECESSARY TO MEET YOUR REQUIREMENTS.

End of MSDS

LITHCO MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT IDENTIFICATION

TRADE NAME (as labeled) Lithco Enviro Blanket Restorer

MANUFACTURER'S NAME: Lithco, Inc. • 9449 Jefferson Blvd. • Culver City, CA 90232-2913

PHONE NUMBER FOR ADDITIONAL INFORMATION: (310) 559-7770 or (800) 454-8426

FAX NUMBER FOR ADDITIONAL INFORMATION: (310) 559-6908 or (888) 454-8426

EMERGENCY INFORMATION: For chemical emergency, spill, leak, fire, exposure or accident call Infotrac, day or night, at (800) 535-5053.

DATE PREPARED OR REVISED: 7/17/08

PREPARED BY (optional):

SECTION II: HAZARDOUS INGREDIENTS

			EXPOSURE LIMITS		
Chemical Names	CAS Numbers	%	ACGIH TLV	OSHA PEL	OTHER
N-methyl pyrrolidone	872-50-4		100 ppm	100 ppm	N/A
Hydroxypropyl cellulose	9004-64-2		NE	NE	N/A

HMIS RATING:

Health: 2

Fire: 1

Reactivity: 0

Personal protection: B

SECTION III: PHYSICAL PROPERTIES

VAPOR DENSITY (AIR = 1): >1

MELTING POINT/RANGE: N.D.

SPECIFIC GRAVITY: 1.03

BOILING POINT/RANGE: ° C: 203

SOLUBILITY IN WATER: Complete

EVAPORATION RATE (BuAc = 1): slower than BuAc

VAPOR PRESSURE, mm Hg @ 20 degrees C: < 1 mbar

APPEARANCE AND ODOR: jelly appearance, strong nut odor

This product contains 98.76 % VOC by formulation. VOC = 8.47 LB/GAL.

This product is not photochemically reactive.

SECTION IV: FIRE AND EXPLOSION

FLASH POINT, ° F. (give method): 200°F (ASTM D93-73) AUTO-IGNITION TEMPERATURE, 518° F

FLAMMABLE LIMITS IN AIR (VOLUME %), LOWER 1.3 % UPPER 9.5%

FIRE EXTINGUISHING MATERIALS:

WATER SPRAY: XX	FOAM: XX	CARBON DIOXIDE: XX	DRY CHEMICAL: XX	OTHER: N/A
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SPECIAL FIRE FIGHTING PROCEDURES: Fire fighting personnel should wear full bunker gear with NIOSH approved SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cool exposed containers with water fog to prevent explosions. Can react with oxidizing materials

This form complies with and is essentially similar to OSHA Form 174 as specified in 29CFR 1910.1200 (Federal OSHA Hazard Communication Standard) and complies with requirements of CAL/OSHA.

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SECTION V: HEALTH HAZARD INFORMATION

SYMPTOMS OF OVEREXPOSURE FOR EACH POTENTIAL ROUTE OF EXPOSURE

INHALED: Not an expected route of exposure.

CONTACT WITH SKIN OR EYES: Severe eye and moderate skin irritant. Defatting of the skin.

ABSORBED THROUGH SKIN: Slight skin absorption hazard.

SWALLOWED: Slight ingestion hazard. Gastrointestinal distress.

HEALTH EFFECTS OR RISKS FROM EXPOSURE (Explain in lay terms)

ACUTE: Severe eye irritant with temporary clouding. Moderate skin irritant. Moderate skin absorption hazard. Slight ingestion hazard. No data found to indicate inhalation hazard.

CHRONIC: No chronic effects of carcinogenicity, mutagenicity (AMES Test), or teratogenicity by dermal exposure have been found. Prolonged skin contact causes redness, irritation and defatting of the skin.

FIRST AID EMERGENCY PROCEDURES

EYE CONTACT: Flush eyes for at least 15 minutes with running water while holding eyelids open. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation persists. Do not wear contaminated clothing until properly laundered.

INHALED: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration or CPR if not breathing. Seek medical attention.

SWALLOWED: Dilute with warm water. Do not induce vomiting. Get immediate medical attention. Never give fluids or induce vomiting if person is unconscious or having convulsions.

SUSPECTED CANCER AGENT?

XXXX NO. THIS PRODUCT'S INGREDIENTS ARE NOT FOUND IN THE LISTS BELOW.

 YES. FEDERAL OSHA NTP IARC

California employers using CAL/OSHA regulated carcinogens must register with CAL/OSHA. The CAL/OSHA and Federal OSHA carcinogen lists are similar.

CALIFORNIA PROP. 65 STATEMENT

THIS PRODUCT DOES / DOES NOT CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR CAUSE REPRODUCTIVE HARM.

PRE-EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Product may aggravate pre-existing skin or respiratory problems.

SECTION VI: REACTIVITY DATA

PRODUCT IS XXX STABLE ____ UNSTABLE

CONDITIONS TO AVOID: Avoid contact with heat, sparks and open flame.

INCOMPATIBILITY (materials to avoid): Strong oxidizing agents, sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS, INCLUDING COMBUSTION: Carbon monoxide, carbon dioxide, oxides of nitrogen and unburned hydrocarbons

HAZARDOUS POLYMERIZATION ____ MAY OCCUR XXX WILL NOT OCCUR.

CONDITIONS TO AVOID: None under normal product use.

SECTION VII: SPILL, LEAK AND DISPOSAL PROCEDURES

SPILL RESPONSE PROCEDURES, INCLUDING EMPLOYEE PROTECTION: Extinguish all sources of ignition. Contain spill. Wear SCBA for airborne concentrations above TLV. Use sparkproof tools during clean-up. Soak up with inert absorbent.

PREPARING WASTES FOR DISPOSAL (containers, neutralization, etc.): Place in non-leaking containers suitable for material and certified for transporting hazardous waste.

NOTE: DISPOSE OF ALL WASTES IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION VIII: SPECIAL HANDLING INFORMATION

VENTILATION AND ENGINEERING CONTROLS: Provide ventilation to keep airborne concentration below TLV.

RESPIRATORY PROTECTION (TYPE): NIOSH/MCA approved for organic vapors for concentrations above TLV.

EYE PROTECTION (TYPE): Splashproof chemical goggles.

GLOVES (SPECIFY MATERIAL): Neoprene, nitrile or PVC.

OTHER CLOTHING AND EQUIPMENT: Eyewash station and safety shower should be provided.

WORK PRACTICES, HYGIENIC PRACTICES: Wash hands thoroughly after use and before eating, drinking, smoking or using the toilet.

OTHER HANDLING AND STORAGE REQUIREMENTS: Keep containers closed when not in use. Do not use near sources of ignition. Avoid prolonged or repeated contact with skin or breathing of vapors. Keep from children. For industrial use only.

PROTECTIVE MEASURES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Use protective gear as indicated above. Do not start electrical equipment in presence of vapors.

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SECTION IX: SHIPPING INFORMATION

FULL DOT SHIPPING NAME: Not Hazardous

DOT HAZARD CLASS: N/A **PACKING GROUP:** N/A **UN/NA NUMBER:** N/A

SECTION X: ENVIRONMENTAL STATEMENT

THIS PRODUCT IS SUBJECT TO REPORTING ACCORDING TO SARA, TITLE III (SUPERFUND AMENDMENT).

Section 311/312 Hazard Category: Fire Hazard

Section 313: No chemicals in this product exceed the de minimus reporting level established by SARA Title III Section 313, 40CFR372.

Toxic Substance Control Act (TSCA) – All components in this product are listed on TSCA inventory.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) – No chemicals in this product are subject to the reporting requirements of CERCLA.

Information contained in this safety data sheet is drawn from recognized sources and is believed to be accurate and correct as of the date of issue. It is presented for your evaluation of the suitability of the product and for compliance with federal and state regulations. No claims are made for the accuracy, completeness and reliability of the information contained herein.

M A T E R I A L S A F E T Y D A T A S H E E T

FOUNTAIN CONCENTRATE 2451

Page: 1

PRODUCT NAME: FOUNTAIN CONCENTRATE 2451

PRODUCT CODE: H446

HMIS CODES: H F R P

CHEMICAL NAME: FOUNTAIN SOLUTION

1 0 0 B

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: PRINTERS' SERVICE

ADDRESS : 26 Blanchard Street

Newark, New Jersey 07105

EMERGENCY PHONE : 1-800-424-9300

LAST REVISION : 04/11/98

INFORMATION PHONE : 1-973-589-7800

DATE REVISED : 06/24/98

PREPARER : ENVIRONMENTAL DEPT.

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
PROPYLENE GLYCOL	57-55-6	.08mmHg 20 C	10 - 20%
LD50 0.5 - 5g/kg			
* 2-BUTOXYETHANOL	111-76-2	0.6 mmHg 20 C	1 - 10%
PEL 25 ppm; TLV 25 ppm // LC50 800 ppm/8hr : LD50 1.746 g/kg			
* AMMONIUM NITRATE	6484-52-2	NL NO DATA	1 - 10%
NO DATA			
ACETIC ACID	64-19-7	13mmHg 20 C	1 - 10%
PEL 10ppm; TLV 10ppm			

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT : 212 F	SPECIFIC GRAVITY (H2O=1): 1.07
VAPOR DENSITY : 0.5 (air = 1)	VAPOR PRESSURE : 16.7 mmHg
DRYING RATE : <0.1(nButyl Acet.=1)	VOC : 0.73 lb/gal
PHOTOREACTIVE : NO	H2O SOLUBILITY : 100%
VOLATILES : > 80% by weight	APPEARANCE : GREEN
PHYSICAL STATE : LIQUID	ODOR : MILD

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: NONE

METHOD USED: NONE

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: NONE

UPPER: NONE

EXTINGUISHING MEDIA: WATER, CARBON DIOXIDE, FOAM, OR DRY POWDER.

SPECIAL FIREFIGHTING PROCEDURES : KEEP CONTAINER COOL.

UNUSUAL FIRE AND EXPLOSION HAZARDS: IF BOILING POINT OF SOLVENT IS REACHED, THE CONTAINER MAY RUPTURE EXPLOSIVELY.

===== SECTION V - REACTIVITY DATA =====

STABILITY: YES IF NO CONDITIONS:

INCOMPATIBILITY (MATERIALS TO AVOID): YES

IF YES WHICH ONES: STRONG OXIDIZER

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN ON IGNITION

HAZARDOUS POLYMERIZATION: NONE

===== SECTION VI - HEALTH HAZARD DATA =====

INDICATIONS OF EXPOSURE:

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: NONE

EYE CONTACT AND SYMPTOMS OF EXPOSURE: REDNESS OR BURNING SENSATION.

SKIN HEALTH RISKS AND SYMPTOMS OF EXPOSURE: REDNESS, ITCHING, IRRITATION.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.

EMERGENCY AND FIRST AID:

M A T E R I A L S A F E T Y D A T A S H E E T
FOUNTAIN CONCENTRATE 2451

Page: 2

INHALATION - NONE

EYES - FLUSH EYES WITH WATER FOR 15 MINUTES. LIFT UPPER AND LOWER LIDS. SEE DOCTOR.

SKIN - WASH WITH SOAP AND WATER.

INGESTION - INDUCE VOMITING. SEE DOCTOR IMMEDIATELY.

HEALTH HAZARDS (ACUTE AND CHRONIC):

EFFECT OF CHRONIC EXPOSURE: PROLONGED HIGH VAPOR EXPOSURE MAY CAUSE LIVER AND KIDNEY PROBLEMS.

EFFECT OF ACUTE EXPOSURE: NONE

IN ALL CASES OF EMERGENCY AND FIRST AID, WE STRONGLY RECOMMEND A DOCTOR BE SEEN

CARCINOGENICITY: NTP CARCINOGEN: No **IARC MONOGRAPHS:** No **OSHA REGULATED:** No
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: DERMATITIS. MAY AGGRAVATE EXISTING LIVER AND KIDNEY AILMENTS.

===== **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE** =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: VENTILATE AREA. KEEP AWAY FROM STRONG OXIDIZERS. HEAT. SPARKS OR OPEN FLAMES. PREVENT SPILL FROM SPREADING BY USING AN INERT MATERIAL. SUCH AS SAND. AS A DAM. KEEP OUT OF ALL WATERWAYS OR WATER DRAINS. DO NOT FLUSH AREA WITH WATER. FOR SMALL SPILLS USE ABSORBENT PADS. FOR LARGE SPILLS. CALL A SPILL RESPONSE TEAM. IF REQUIRED. CONTACT STATE/LOCAL AGENCIES.

WASTE DISPOSAL METHOD: PRODUCT SOAKED ABSORBENT SHOULD BE PLACED IN SEALED PLASTIC DRUMS FOR DISPOSAL IN ACCORDANCE WITH LOCAL. STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT FREEZE. IF FROZEN. THAW OUT AND MIX WELL BEFORE USING.

OTHER PRECAUTIONS: WE RECOMMEND THAT CONTAINERS BE EITHER PROFESSIONALLY RECONDITIONED FOR REUSE OR PROPERLY DISPOSED OF BY CERTIFIED FIRMS TO HELP REDUCE THE POSSIBILITY OF AN ACCIDENT. DISPOSAL OF CONTAINERS SHOULD BE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. "EMPTY" DRUMS SHOULD NOT BE GIVEN TO INDIVIDUALS.

===== **SECTION VIII - CONTROL MEASURES** =====
EXPOSURE CONTROL AND PERSONAL PROTECTION:

RESPIRATORY PROTECTION: NONE NEEDED.

VENTILATION: MECHANICAL (GENERAL) SATISFACTORY.

PROTECTIVE GLOVES: USE RUBBER OR SYNTHETIC GLOVES.

EYE PROTECTION: USE SAFETY GLASSES OR GOGGLES.

OTHER PROTECTIVE EQUIPMENT OR CLOTHING: NONE.

WORK/HYGIENIC PRACTICES: WASH SKIN/CLOTHES IF THEY COME IN CONTACT WITH THE PRODUCT. DO NOT WEAR CLOTHING WET WITH THE PRODUCT.

===== **SECTION IX - SHIPPING INFORMATION** =====

GROUND SHIPMENT.

D.O.T HAZARD CLASSIFICATION: NOT A D.O.T HAZARDOUS MATERIAL. **UN No** : NONE

===== **SECTION X - DISCLAIMER** =====

THE INFORMATION AND RECOMMENDATIONS HEREIN HAVE BEEN COMPILED FROM OUR RECORDS AND OTHER SOURCES BELIEVED TO BE RELIABLE. NO WARRANTY, GUARANTEE OR REPRESENTATION IS MADE BY PRINTERS' SERVICE AS TO THE SUFFICIENCY OF ANY REPRESENTATION. THE ABSENCE OF DATA INDICATES ONLY THAT THE DATA IS NOT READILY AVAILABLE TO US. ADDITIONAL SAFETY MEASURES MAY BE REQUIRED UNDER PARTICULAR OR EXCEPTIONAL CONDITIONS OF USE. WITH REGARD TO THE MATERIALS THEMSELVES, PRINTERS' SERVICE MAKES NO WARRANTY OF ANY KIND WHATEVER. EXPRESSED OR IMPLIED. AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

MATERIAL SAFETY DATA SHEET

Product Code: B012008

FOUNT 379

SECTION 1: MANUFACTURER IDENTIFICATION

Manufacturer's Name: Day International Chemical Products Div.
Address: 130 West Second Street, Suite 1700
Dayton, Ohio 45402

Emergency Phone: 800-424-9300 CHEMTREC®
Name of Preparer: Day Chemical Prod. Div

Information Phone: 800-336-8276
Date Printed: 8/2/2007
Date Revised: 08/02/2007

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	X

SECTION 2: HAZARDOUS INGREDIENTS / SARA III INFORMATION

Component	CAS Number	Vapor Pressure mm Hg @ Temp	Weight Percent
*Glycol Ether DB OSHA PEL: N/E, ACGIH® TLV®: N/E, Mkg: 35ppm Hazardous Air Pollutant	112-34-5	.02 77°F	6%
Glycerine OSHA PEL: 10mg/M3, ACGIH® TLV®: TWA: 10mg/M3 as Mist	56-81-5	1.0 68°F	5.2%
*Non-Hazardous Water Dissociable Nitrates			1.3%

* Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372.
All ingredients are listed on the EPA TSCA Inventory

SECTION 3: PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT / RANGE:	>212°F
VAPOR DENSITY:	Heavier than air.
EVAPORATION RATE:	Slower than water.
V.O.C. (EPA METHOD 24) lb/gal:	0.9
VAPOR PRESSURE:	Not Applicable.
SOLUBILITY IN WATER:	100%
APPEARANCE AND ODOR:	Green Liquid - Mild Odor
SPECIFIC GRAVITY (H2O=1):	1.09

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	None.
METHOD USED:	TAG CC
FLAMMABLE LIMITS IN AIR BY VOLUME:	None. Aqueous product.
EXTINGUISHING MEDIA:	Use any fire extinguishing media.
SPECIAL FIREFIGHTING PROCEDURES:	Under normal conditions this product does not support combustion. However, as in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) and full protective (bunker) gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None Known.

SECTION 5: REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID:

Avoid conditions of excess heat to prolong shelf life.

INCOMPATIBILITY (MATERIALS TO AVOID):

Avoid mixing with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

None known.

HAZARDOUS POLYMERIZATION:

Will Not Occur.

SECTION 6: HEALTH HAZARD DATA**INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:**

Not an inhalation hazard in normal industrial use.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Skin and eye contact may cause mild to moderate irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Prolonged or repeated skin contact may cause irritation.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Small amounts transferred to the mouth by fingers during use, etc., should not cause injury. Swallowing large amounts of this product may cause nausea, moderate gastro-intestinal irritation, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC):

This product may cause mild to moderate irritation upon contact with eyes and mild irritation to skin. No chronic effects are known or expected.

CARCINOGENICITY NTP CARCINOGEN: No

IARC CARCINOGEN: No

OSHA CARCINOGEN: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate pre-existing dermatitis. □

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Hold eyelids open and flush with water for 15 minutes. Contact physician if irritation persists. **SKIN:** Wash with soap and water. **INGESTION:** If victim is fully conscious, induce vomiting as directed by medical personnel. Seek medical attention immediately. **INHALATION:** Move victim to fresh air. Give oxygen if breathing is labored.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASES OR SPILLED:**

Clean up small spills with soap water and a mop. Large spills should be diked and kept from entering the sewer. Soak up large spills with absorbent or transfer liquid into a closed container for later disposal.

WASTE DISPOSAL METHOD:

Product may meet the sewer disposal guidelines in many municipalities. Sewer disposal is governed by EPA Regulations (Clean Water Act) which controls local sewer authorities (POTW). Sewer disposal of spent product may be restricted by discharge limits for specific chemicals set by the POTW and end of pipe chemical levels of the individual user. Check with the local POTW before sewer disposing.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in a cool dry area away from sunlight and excess heat. Protect from freezing. When using or transferring this product, wear proper personal protective equipment.

Product Code: B012005

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OTHER PRECAUTIONS/DOT INFORMATION::

DOT Proper Shipping Name: Not Regulated, Hazard Class: N/A, ID No.: N/A, Packing Group: N/A

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION:

No special protection is required under normal conditions of use.

VENTILATION:

No special ventilation required.

PROTECTIVE GLOVES:

Not required under normal conditions of use. For extended exposure wear gloves made of butyl or nitrile rubber.

EYE PROTECTION:

Wear safety glasses with side shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A personal protective rating of X means you must see your supervisor for guidance. OSHA regulations (29CFR Part 1910, Subpart I) require employers to evaluate Personal Protective Equipment requirements in the workplace.

WORK/HYGIENIC PRACTICES:

Wash with soap and water after product contact with skin.

SECTION 9: DISCLAIMER

The information on this MSDS is believed to be accurate as of the date shown in SECTION 1. Since the use of this product is not under the control of the manufacturer, it is the user's responsibility to determine what constitutes safe usage for a particular product. This form may be reproduced in quantities necessary to meet your requirements.

MATERIAL SAFETY DATA SHEET

Product Code: B017282

IPA

SECTION 1: MANUFACTURER IDENTIFICATION

Manufacturer's Name: Day International Chemical Products Div.
Address: 130 West Second Street, Suite 1700
Dayton, Ohio 45402

Emergency Phone: 800-424-9300 CHEMTREC®
Name of Preparer: Day Chemical Prod. Div

Information Phone: 800-336-8276
Date Printed: 6/27/2007
Date Revised: 06/27/2007

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	X

SECTION 2: HAZARDOUS INGREDIENTS / SARA III INFORMATION

Component	CAS Number	Vapor Pressure mm Hg @ Temp	Weight Percent
Isopropanol OSHA PEL 400ppm, ACGIH® TLV® TWA 200ppm, STEL 400ppm	67-63-0	31.2 66°F	100%

All ingredients are listed on the EPA TSCA Inventory

SECTION 3: PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING RANGE / POINT:	180°F
VAPOR DENSITY:	Heavier than air.
EVAPORATION RATE:	Faster than n-Butyl Acetate.
V.O.C. (EPA METHOD 24) lb/gal:	6.55
VAPOR PRESSURE (MM HG @ 20 C):	31
SOLUBILITY IN WATER:	100%
APPEARANCE AND ODOR:	Clear Liquid - Characteristic Alcohol Odor
SPECIFIC GRAVITY (H20=1):	0.82

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	53°F
METHOD USED:	TAG CC
FLAMMABLE LIMITS IN AIR BY VOLUME:	
LOWER:	2.0%
UPPER:	12.0%

EXTINGUISHING MEDIA:

Foam, CO2, Dry Chemical, Water Fog.

SPECIAL FIREFIGHTING PROCEDURES:

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) and full protective gear. Water may not be effective to extinguish fire. Use water spray to cool fire-exposed containers and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Treat as a petroleum fire. Vapors can travel to source of ignition and flash back.

SECTION 5: REACTIVITY DATA

Product Code: B017282 IPA

Page 2 of 3

STABILITY:

Stable

CONDITIONS TO AVOID:

Avoid heat, sparks, flame and other sources of ignition.

INCOMPATIBILITY (MATERIALS TO AVOID):

Avoid mixing with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Burning will produce oxides of carbon and dense smoke.

HAZARDOUS POLYMERIZATION:

Will Not Occur.

SECTION 6: HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Excess vapor concentrations are attainable. Overexposure will cause irritation of the nose and throat and cause signs of nervous system depression such as headache, drowsiness, dizziness and unconsciousness.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Skin and eye contact may cause moderate to severe irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Single prolonged exposure is not likely to result in the product being absorbed through the skin in harmful amounts.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Ingestion of this product will cause nausea, gastro-intestinal irritation, diarrhea and possible damage to vital organs. Follow first aid procedures.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Repeated or abusive breathing of concentrated vapors may effect pulmonary, cardiovascular, and central nervous systems.
Repeated skin contact will dry out and crack skin. Aspiration hazard if swallowed; aspiration of product into the lungs can cause chemical pneumonitis.

CARCINOGENICITY NTP CARCINOGEN: No

IARC CARCINOGEN: No

OSHA CARCINOGEN: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate pre-existing dermatitis. Inhalation of vapors may aggravate pre-existing asthma like conditions.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air. Give oxygen if breathing is labored. Apply artificial respiration if not breathing. Seek medical help. **SKIN:** Remove all contaminated clothing and shoes. Wash with soap and water. Do not reuse clothing and shoes until cleaned. **EYES:** Flush eyes with plenty of water while removing any contact lenses. Hold eyelids open and continue flushing for at least 15 minutes. **INGESTION:** DO NOT INDUCE vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention immediately.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASES OR SPILLED:

Eliminate all ignition sources. Spills should be diked and must be kept from entering the sewer. Soak up with absorbent or transfer liquid into a closed container for later disposal. Use spark-proof tools and explosion proof equipment.

WASTE DISPOSAL METHOD:

If this product as supplied, becomes a waste it is regulated by RCRA as Ignitable Waste, EPA I.D. #D001. Suitable methods of disposal include reclamation and fuel blending. Contact a Licensed Hazardous Waste Hauler for more information.

Product Code: B017282

IPA

Page 3 of 3

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Containers should be grounded and bonded before transferring product. Store in the original closed container away from sunlight, excess heat, sparks, flames and other sources of ignition. Avoid skin or eye contact. Avoid breathing vapors. When transferring or using this product, wear proper personal protective equipment. Store and handle as a Flammable Liquid.

OTHER PRECAUTIONS / DOT INFORMATION:

DOT Proper Shipping Name: Isopropanol, Hazard Class: 3, ID No.: UN1219, Packing Group II. Product is classified as an OSHA Class IB Flammable Liquid.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION:

The use of respiratory protection is advised when concentrations exceed the established exposure limits in SECTION 2. Depending on the airborne concentration, use a respirator with appropriate organic vapor cartridge (NIOSH approved).

VENTILATION:

If current ventilation is inadequate to maintain concentrations below the established exposure limits in SECTION 2, additional ventilation or local exhaust system is required. Explosion proof electrical systems must be used.

PROTECTIVE GLOVES:

Avoid prolonged or repeated skin contact. Wear solvent resistant gloves made of nitrile or butyl rubber.

EYE PROTECTION:

Wear safety glasses with side shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A personal protective rating of X means you must see your supervisor for guidance. OSHA regulations (29CFR Part 1910, Subpart I) require employers to evaluate Personal Protective Equipment requirements in the workplace.

WORK/HYGIENIC PRACTICES:

Wash with soap and water after product contact with skin.

SECTION 9: DISCLAIMER

The information on this MSDS is believed to be accurate as of the date shown in SECTION 1. Since the use of this product is not under the control of the manufacturer, it is the user's responsibility to determine what constitutes safe usage for a particular product. This form may be reproduced in quantities necessary to meet your requirements.

ExxonMobil
Chemical**MATERIAL SAFETY DATA SHEET**

ExxonMobil Chemical Company

A Division of Exxon Mobil Corporation

IPA USP

PAGE: 1
DATE PREPARED: APR 1, 2000
MSDS NO.: 90242000**SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****PRODUCT NAME:** IPA USP**CHEMICAL NAME:**

2-Propanol

CAS 67-63-0

CHEMICAL FAMILY:

Aliphatic Alcohol

PRODUCT DESCRIPTION:

Clear colorless liquid.

CONTACT ADDRESS:ExxonMobil Chemical Company
P.O. Box 3272, Houston, Texas 77253-3272**** EMERGENCY TELEPHONE NUMBERS: (24 Hours) ****
**** CHEMTREC (800) 424-9300 ****
**** ExxonMobil Chemical Company (800) 726-2015 ******NON EMERGENCY TELEPHONE NUMBERS : (8am-5pm M-F)****FOR HEALTH AND SAFETY INFORMATION CALL : (281) 870-6884****FOR GENERAL PRODUCT INFORMATION CALL : (281) 870-6000****SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS**

This product is hazardous as defined in 29 CFR1910.1200.

OSHA HAZARD

Flammable

PEL: TLV

Eye irritant

SECTION 3 HAZARDS IDENTIFICATION**POTENTIAL HEALTH EFFECTS****EYE CONTACT:**

Irritating, and will injure eye tissue if not removed promptly.

SKIN CONTACT:Frequent or prolonged contact may irritate and cause dermatitis.
Low order of toxicity.**INHALATION:**Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.
Negligible hazard at ambient temperature (-18 to 38 Deg C; 0 to 100 Deg F)**INGESTION:**

Minimal toxicity.

Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

Continues on page 2

ExxonMobil
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PAGE: 2
DATE PREPARED: APR 1, 2000
MSDS NO.: 90242000**SECTION 4 FIRST AID MEASURES****EYE CONTACT:**

Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT:

Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

SECTION 5 FIRE-FIGHTING MEASURES**FLASH POINT:**

53 Deg F. METHOD: TCC ASTM D56

FLAMMABLE LIMITS:

LEL: 2.0 UEL: 12.7 @ 77 Deg F.

AUTOIGNITION TEMPERATURE:

> 662 Deg F.

GENERAL HAZARD

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.

Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

No unusual

SECTION 6 ACCIDENTAL RELEASE MEASURES**LAND SPILL**

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15 REGULATORY

Continues on page 3

ExxonMobil
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INFORMATION) notify the National Response Center.
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.

Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 7 STORAGE AND HANDLING**ELECTROSTATIC ACCUMULATION HAZARD:**

No, but use proper bonding and/or grounding procedure.

STORAGE TEMPERATURE, °F:

Ambient

LOADING/UNLOADING TEMPERATURE, °F:

Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

LOADING/UNLOADING VISCOSITY, cSt:

2.7

STORAGE AND HANDLING:

Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials.

Do NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight.

This material is not a static accumulator, but use proper bonding and/or grounding procedures.

Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**EXPOSURE CONTROLS**

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

For open systems where contact is likely, wear long sleeves, chemical resistant gloves, and chemical goggles.

Where contact may occur, wear safety glasses with side shields.

Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent

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overexposure by inhalation.
WORKPLACE EXPOSURE GUIDELINES
OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE
EXPOSURE LIMITS:

A TWA of 400 ppm (980 mg/m3) and a STEL of 500 ppm (1225 mg/m3)
for Isopropyl Alcohol.

The recommended permissible exposure levels indicated above reflect the
levels revised by OSHA in 1989 or in subsequent regulatory activity.
Although the 1989 levels have since been vacated by the 11th Circuit Court
of Appeals, ExxonMobil Chemical Company recommends that the lower exposure
levels be observed as reasonable worker protection.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

A TWA of 400 ppm (980 mg/m3) and a STEL of 500 ppm (1230 mg/m3) for
Isopropyl Alcohol.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**SPECIFIC GRAVITY, at °F:**

0.79 at 68

DENSITY at °F: 6.6 lbs/gal at 68**SOLUBILITY IN WATER, wt. % at °F:**

100.00 at 68

SP. GRAV. OF VAPOR, at 1 atm (Air=1):

Greater than 1.00

EVAPORATION RATE, n-Bu Acetate=1:

2.3

VAPOR PRESSURE, mmHg at °F:

36 at 77

VISCOSITY OF LIQUID, cSt at °F:

2.2 at 68

FREEZING/MELTING POINT, °F:

-128

BOILING POINT, °F:

180 to 181

SECTION 10 STABILITY AND REACTIVITY**STABILITY:**

Stable

CONDITIONS TO AVOID INSTABILITY:

Not applicable.

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION:

Not Applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:Caustics, amines, alkanolamines, aldehydes, strong oxidizing agents, and
chlorinated compounds.**HAZARDOUS DECOMPOSITION PRODUCTS:**

None

SECTION 11 TOXICOLOGICAL INFORMATION

Please refer to Section 3 for available information on potential health effects.

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ExxonMobil
Chemical**MATERIAL SAFETY DATA SHEET**ExxonMobil Chemical Company
A Division of Exxon Mobil Corporation

IPA USP

PAGE: 5
DATE PREPARED: APR 1, 2000
MSDS NO.: 90242000**SECTION 12 ECOLOGICAL INFORMATION**

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Please refer to Sections 5, 6, and 15 for disposal and regulatory information.

SECTION 14 TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):
DOT SHIPPING DESCRIPTION: ISOPROPANOL, 3, UN 1219, II

SECTION 15 REGULATORY INFORMATION**TSCA:**

This product is listed on the TSCA Inventory at CAS Registry Number 67-63-0

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories: Immediate health, Delayed Health, Fire.

This information may be subject to the provisions of the Community Right-to-Know Reporting Requirements (40 CFR 370) if threshold quantity criteria are met.

SECTION 16 OTHER INFORMATION**HAZARD RATING SYSTEMS:**

This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704
HEALTH	2	1
FLAMMABILITY	3	3
REACTIVITY	0	0

KEY
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

ExxonMobil
Chemical

MATERIAL SAFETY DATA SHEET

ExxonMobil Chemical Company
A Division of Exxon Mobil Corporation

IPA USP

PAGE: 6
DATE PREPARED: APR 1, 2000
MSDS NO.: 90242000

REVISION SUMMARY:

Since March 4, 1999 the corporate names have been changed to reflect the merger of Exxon and Mobil.

REFERENCE NUMBER:

HDHA-C-00021

SUPERSEDES ISSUE DATE:
March 4, 1999

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE. WE DO NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION NOR DO WE OFFER WARRANTY AGAINST PATENT INFRINGEMENT.

LAST PAGE

MATERIAL SAFETY DATA SHEET

SUPERIOR PRINTING INKS
70 BETHUNE STREET
NEW YORK, NY 10014

INFORMATION PHONE: (212) 741-3600
EMERGENCY PHONE: (212) 741-3600
DATE PREPARED: June 25, 2001
HMS: H1 P0 R0

SECTION I

PRODUCT CLASS: Roller, Blanket and Plate Cleaner
TRADE NAME: Kwik 'N Easy
PRODUCT NUMBER: —

SECTION II — HAZARDOUS COMPONENTS

This product is not considered hazardous under the OSHA Hazard Communication Standard, 29CFR 1910.1200.

SECTION III — PHYSICAL DATA

BOILING RANGE (°F): 210
VAPOR DENSITY VS. AIR: Heavier
LIQUID DENSITY VS. WATER: Heavier - 1.10 @ 68°F
EVAPORATION RATE VS. BUTYL ACETATE: Slower
SOLUBILITY IN WATER: Partial - White emulsion may be formed
APPEARANCE: White Suspension
TYPE OF ODOR: Slightly Aromatic
% VOLATILES, Wt.: <1 - EPA Method 8260

SECTION IV — FIRE AND EXPLOSION DATA

FLAMMABILITY CLASSIFICATION
OSHA: N/A **DOT:** Not Regulated **FLASH PT. (°F)** 306 **LEL:**
(Method used):

EXTINGUISHING MEDIA: Water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

SPECIAL FIRE FIGHTING PROCEDURES: None.

SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Continued use on hands may cause dry skin. This product is NOT intended as a hand cleaner. Irritation may occur to eyes, skin and respiratory tract.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: None known.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush thoroughly with water.

Skin: Wash with soap and water.

Ingestion: Seek medical advice.

SECTION VI — REACTIVITY DATA

PRODUCT STABILITY: Stable.

CONDITIONS TO AVOID: Contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: CO and CO₂ on burning.

HAZARDOUS POLYMERIZATION: Will not occur.

SUPERIOR Printing Inks
June 25, 2001

SECTION VII — SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up, contain free material, recover for proper disposal.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and Local regulations.

SECTION VIII — SPECIAL PROTECTION INFORMATION

VENTILATION: General ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: None required normally. Persons with skin allergies should use gloves.

RESPIRATORY PROTECTION: None required in normal usage.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None

SECTION IX — SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Avoid excessive skin and eye contact. Keep container closed when not in use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

While Superior Printing Ink Company, Inc. believes the data set forth herein are accurate as of the date hereof, Superior Printing Ink Company, Inc. makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

MATERIAL SAFETY DATA SHEET

Sealed Air Corporation
Cryovac North America
P. O. Box 464
Duncan, SC 29334-0464

Telephone: (864) 433-2000

Effective Date: 12-31-98

Date Printed: 5/20/2004

Prepared By: James B. Passmore

PRODUCT IDENTIFICATION

LD935

COMPONENT INFORMATION

In accordance with 29 CFR 1910.1200, this product contains no hazardous components.

PHYSICAL DATA

BOILING POINT: NA
VAPOR PRESSURE: NA
VAPOR DENSITY: NA
SOLUBILITY IN WATER: Nil
APPEARANCE AND ODOR: Clear and odorless
SPECIFIC GRAVITY: 0.91-0.95
MELTING POINT: 100° - 150°C
EVAPORATION RATE (BUTYL ACETATE=1): NA
WATER REACTIVE: NO

FIRE AND EXPLOSION HAZARD DATA

AUTO-IGNITION TEMPERATURE: Not Available
FLAMMABILITY LIMITS: NA
EXTINGUISHING MEDIA: Water, CO₂, Foam, Fog, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained Breathing Apparatus
UNUSUAL FIRE AND EXPLOSION HAZARD: Hydrocarbon oxidation products, including CO and CO₂, can be formed during combustion.

REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY (MATERIALS TO AVOID): None known.
HAZARDOUS DECOMPOSITION PRODUCTS: NA
HAZARDOUS POLYMERIZATION: Will not occur.

HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Not hazardous.

CARCINOGENICITY: Not listed in NTP, OSHA, or IARC Monographs.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION: Not required.

PROTECTIVE GLOVES: Not normally required.

EYE PROTECTION: Not normally required.

VENTILATION: Adequate ventilation or local exhaust to remove fumes when heat sealing or hot-wire cutting.

OTHER PROTECTIVE CLOTHING AND EQUIPMENT: None

HYGIENIC PRACTICE: No special requirements

PRECAUTIONS FOR SAFE HANDLING AND USE

ACTION TO TAKE FOR SPILLS OR LEAKS: NA

WASTE DISPOSAL: Incineration or landfill in compliance with federal, state and local regulations

HANDLING AND STORAGE PRECAUTIONS: None

EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW (SARA TITLE 3)

This product does not contain a chemical which is listed in Section 313 above the *de minimus* concentrations.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; It is the buyer's responsibility to ensure activities comply with federal, state, and local laws.

MATERIAL SAFETY DATA SHEET

Product Code: B092040

MAJESTA 400

SECTION 1: MANUFACTURER IDENTIFICATION

Manufacturer's Name: Day International Chemical Products Div.
Address: 130 West Second Street, Suite 1700
Dayton, Ohio 45402

Emergency Phone: 800-424-9300 CHEMTREC®
Name of Preparer: Day Chemical Prod. Div

Information Phone: 800-338-8276
Date Printed: 8/27/2007
Date Revised: 08/27/2007

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
HAZARDOUS PRESCRIPTION	X

SECTION 2: HAZARDOUS INGREDIENTS / SARA II INFORMATION

Component	CAS Number	Vapor Pressure mm Hg @ Temp	Weight Percent
*Glycol Ether DB OSHA PEL: N/E, ACGIH® TLV®: N/E, Mrg: 35ppm Hazardous Air Pollutant	112-34-5	.02 77°F	6%
Glycerine OSHA PEL: 10mg/M3, ACGIH® TLV®: TWA: 10mg/M3 as Mist	56-81-5	1.0 66°F	5.2%
*Non-Hazardous Water Dissociable Nitrates			1.4%

* Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372.
All ingredients are listed on the EPA TSCA Inventory

SECTION 3: PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT / RANGE:	>212°F
VAPOR DENSITY:	Heavier than air.
EVAPORATION RATE:	Slower than water.
V.O.C. (EPA METHOD 24) lb/gal:	0.9
VAPOR PRESSURE:	Not Applicable.
SOLUBILITY IN WATER:	100%
APPEARANCE AND ODOR:	Green Liquid - Mild Odor
SPECIFIC GRAVITY (H20=1):	1.05

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	None.
METHOD USED:	TAG CC
FLAMMABLE LIMITS IN AIR BY VOLUME:	None. Aqueous product.
EXTINGUISHING MEDIA:	Use any fire extinguishing media.
SPECIAL FIREFIGHTING PROCEDURES:	Under normal conditions this product does not support combustion. However, as in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) and full protective (bunker) gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None Known.

SECTION 5: REACTIVITY DATA

Product Code: B092040 MAJESTA 400

Page 2 of 3

STABILITY:

Stable

CONDITIONS TO AVOID:

Avoid conditions of excess heat to prolong shelf life.

INCOMPATIBILITY (MATERIALS TO AVOID):

Avoid mixing with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

None known.

HAZARDOUS POLYMERIZATION:

Will Not Occur.

SECTION 6 HEALTH HAZARD DATA**INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:**

Not an inhalation hazard in normal industrial use.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Skin and eye contact may cause mild to moderate irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Prolonged or repeated skin contact may cause irritation.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Small amounts transferred to the mouth by fingers during use, etc., should not cause injury. Swallowing large amounts of this product may cause nausea, moderate gastro-intestinal irritation, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC):

This product may cause mild to moderate irritation upon contact with eyes and mild irritation to skin. No chronic effects are known or expected.

CARCINOGENICITY NTP CARCINOGEN: No

IARC CARCINOGEN: No

OSHA CARCINOGEN: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate pre-existing dermatitis.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Hold eyelids open and flush with water for 15 minutes. Contact physician if irritation persists. **SKIN:** Wash with soap and water. **INGESTION:** If victim is fully conscious, induce vomiting as directed by medical personnel. Seek medical attention immediately. **INHALATION:** Move victim to fresh air. Give oxygen if breathing is labored.

SECTION 7 PRECAUTIONS FOR SAFE HANDLING AND USE**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASES OR SPILLED:**

Clean up small spills with soap water and a mop. Large spills should be diked and kept from entering the sewer. Soak up large spills with absorbent or transfer liquid into a closed container for later disposal.

WASTE DISPOSAL METHOD:

Product may meet the sewer disposal guidelines in many municipalities. Sewer disposal is governed by EPA Regulations (Clean Water Act) which controls local sewer authorities (POTW). Sewer disposal of spent product may be restricted by discharge limits for specific chemicals set by the POTW and end of pipe chemical levels of the individual user. Check with the local POTW before sewer disposing.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store in a cool dry area away from sunlight and excess heat. Protect from freezing. When using or transferring this product, wear proper personal protective equipment.

Product Code: B092040

MAJESTA 400

Page 3 of 3

OTHER PRECAUTIONS/DOT INFORMATION::

DOT Proper Shipping Name: Not Regulated, Hazard Class: N/A, ID No.: N/A, Packing Group: N/A

SECTION 8: CONTROL MEASURES**RESPIRATORY PROTECTION:**

No special protection is required under normal conditions of use.

VENTILATION:

No special ventilation required.

PROTECTIVE GLOVES:

Not required under normal conditions of use. For extended exposure wear gloves made of butyl or nitrile rubber.

EYE PROTECTION:

Wear safety glasses with side shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A personal protective rating of X means you must see your supervisor for guidance. OSHA regulations (29CFR Part 1910, Subpart I) require employers to evaluate Personal Protective Equipment requirements in the workplace.

WORK/HYGIENIC PRACTICES:

Wash with soap and water after product contact with skin.

SECTION 9: DISCLAIMER

The information on this MSDS is believed to be accurate as of the date shown in SECTION 1. Since the use of this product is not under the control of the manufacturer, it is the user's responsibility to determine what constitutes safe usage for a particular product. This form may be reproduced in quantities necessary to meet your requirements.

Varn International, Inc., a Flint Group Company

14909 N. Beck Road
Plymouth, MI 48180

Para preguntas sobre el producto, llame a: (800) 336-VARN(8276)
Para preguntas sobre la salud y la seguridad, llame a: (800) 336-VARN(8276)
Cuestiones de urgencia en salud y seguridad después
del horario comercial: (800) 391-0698 Prosar (US/Canada)
Contactos de urgencia 24 horas en casos de siniestro: (800) 424-9300 Chemtrec (US/Canada)

Hojas de Seguridad de Materiales

I. IDENTIFICACIÓN DEL PRODUCTO Y DE LA COMPAÑÍA

Nombre del producto: MAJESTA 606
Código del producto: 650-B092136
Código MSDS: MSS-00940153
Número de revisión: 2
Fecha de revisión: 2012-08-17 09:28:19

II. INFORMACIÓN/COMPOSICIÓN DE LOS INGREDIENTES

CAS#	Nombre químico	%
111-76-2	Ethylene glycol mono-n-butyl ether	1 - 5
56-81-5	Glycerine	1 - 5
Propietario	Proprietary Surfactant	0.5 - 1.5

Los componentes que no se enumeran no representan un peligro Hsco ni para la salud según la definición de 29 CFR 1910.1200 (Regla de Comunicación de Peligros).

III. IDENTIFICACIÓN DE RIESGOS

Clasificación HMIS Salud: 2 Inflamabilidad: 0 Reactividad: 0
HMIS Flammability based upon firepoint exemption.

Este producto se incluye en la siguiente clasificación WHMIS:

D1A
D2B

Vías de acceso: Inhalación, Ingestión, Contacto con la piel, Contacto con los ojos
Órganos en riesgo: Riñones, Hígado, Piel, Sangre, Ojos, Piel, Ojos, Riñones, Vías respiratorias
Condiciones médicas agravadas: Enfermedades del riñón, Enfermedades del hígado, Enfermedades de la piel, entre ellas, eccema y la sensibilización, Enfermedades del ojo, Enfermedades respiratorias, entre ellas, asma y bronquitis

Efectos Inmediatos (graves) a la salud a través de la vía de exposición

Inhalación: Daño/a! Puede ocasionar daños sistémicos.
Contacto cutáneo: Puede ocasionar irritación menor de la piel, piel desgrasada y dermatitis.
Contacto con los ojos: Puede ocasionar irritación, lagrimeo y enrojecimiento menores.
Ingestión: Daño/a si se Ingiera. Puede ocasionar envenenamiento sistémico.

Efectos sobre la salud a largo plazo (crónicos)

En los campos reproductivos y de desarrollo: No hay datos disponibles para indicar que el producto o algún componente presente a más del 0,1% pueda ocasionar defectos de nacimiento.

MAJESTA 606

Mutación genética:	No hay datos disponibles para indicar que el producto o algún componente presente a más del 0,1% es mutagénico o genotóxico.
Inhalación:	Con la exposición prolongada y/o repetida, puede ocasionar irritación respiratoria menor, mareos, debilidad, fatiga, náuseas y dolor de cabeza.
Contacto cutáneo:	Con el contacto prolongado o repetido, puede ocasionar irritación moderada de la piel, piel desgrasada y dermatitis. No es probable que ocasione daños permanentes. Con la exposición prolongada o repetida, dañino/a si se absorbe a través de la piel. Puede ocasionar irritación y daños sistémicos graves.

¿Algún ingrediente de los que conforman este producto aparece en la lista de la OSHA de materiales identificados como cancerígenos con una cantidad $\geq 0.1\%$ en peso? Si o no

OSHA	No	NTP	No	IARC 1 & 2A	No	NIOSH	No
				IARC 2B	No		

IV. MEDIDAS DE PRIMEROS AUXILIOS

Inhalación:	Este material no presenta un peligro si se inhala. Traslade a la persona al aire fresco después de una exposición transportada por el aire si se presenta algún síntoma.
Ojos:	Utilice un lavavojos para quitar el producto químico del ojo sin importar el nivel de peligro. Enjuague el ojo afectado durante al menos veinte minutos. Inclíne la cabeza para evitar que el producto químico se transfiera al ojo sin contaminar. Procure asesoramiento médico después del enjuague.
Contacto cutáneo:	Lave con agua y jabón. Procure atención médica si aparece o persiste la irritación.
Ingestión:	No representa un peligro en el uso industrial normal. No induzca el vómito. Procure atención médica si aparecen los síntomas. Entregue al proveedor de atención médica esta MSDS.

V. MEDIDAS CONTRA INCENDIOS

Resumen de inflamabilidad:	No es combustible
Medios de extinción:	No combustible. Emplee medios extintores apropiados para el incendio circundante.
Riesgos de incendio o explosión:	El material no se encenderá ni arderá. Este producto es una mezcla acuosa que no arderá. Si se evapora hasta quedar seco, los residuos sólidos pueden representar un peligro moderado de incendio.
Métodos de protección y lucha contra incendios:	No arderá; no se dispone de instrucciones especiales. Emplee métodos apropiados para los materiales circundantes.
Productos de combustión peligrosa:	Dióxido de carbono, Monóxido de carbono
Punto de inflamación:	No hay datos. El material tiene base de agua y no se inflamará.
Firepoint:	Firepoint determinó a ser $>212^{\circ}\text{F}$ (100°C)

VI. MEDIDAS EN CASO DE EMISIÓN ACCIDENTAL

Equipo y precauciones personales:	La exposición al material derramado puede ser irritante o dañina. Siga las recomendaciones de los equipos de protección personal que se encuentran en la Sección VIII de este MSDS. Puede ser necesario tomar precauciones adicionales en base a las circunstancias especiales creadas por el derrame, entre ellas: el material derramado, la cantidad del derrame, el área en el cual ocurrió el derrame. También considere los conocimientos de los empleados en el área que responden al derrame.
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VII. MANIPULACIÓN Y ALMACENAMIENTO

Uso de producto:	Lithographic Fountain Concentrate
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Precauciones en la manipulación:	Material dañino o irritante. Evite el contacto y evite respirar el material. Emplee sólo en un área bien ventilada. Lávese minuciosamente después de manipularlo/a. Al igual que con todos los productos químicos, se debe seguir las prácticas de la buena higiene industrial al manejar este material. Evite el contacto con el material, evite respirar el polvo o humos, emplee sólo en un área bien ventilada.
Condiciones de almacenamiento:	No permita que se congele. Mantenga el recipiente cerrado cuando no lo emplea

VIII. CONTROLES A LA EXPOSICIÓN/PROTECCIÓN PERSONAL

Medidas técnicas:	No hay límites de exposición para los componentes de este producto. No es probable que se requieran controles de ingeniería para mantener la comodidad de los operarios bajo condiciones normales de uso.
Protección para el sistema respiratorio:	No se requiere protección respiratoria bajo las condiciones normales de uso.
Protección ocular:	Use antiparras de seguridad al manipular este producto.
Protección cutánea:	Normalmente no se considera un peligro para la piel. Donde el uso puede producir contacto con la piel, practique buena higiene personal y utilice una crema contra las dermatitis y/o guantes impermeables estilo quirúrgico. Lave las manos y otras áreas expuestas con agua y un jabón suave antes de comer, tomar y al dejar el trabajo.
Guantes:	Usar material impermeable. Goma butílica o Nitrilo

Pautas para la exposición:

Número CAS	Nombre químico	Límites de exposición OSHA	ACGIH TLV - TWA	ACGIH STEL	IDLH
111-76-2	Ethylene glycol mono-n-butyl ether	50 ppm TWA; 240 mg/m ³ TWA prevent or reduce skin absorption	20 ppm TWA	No STEL	700 ppm IDLH
56-81-5	Glycerine	TOTAL DUST: 15 MG/M ³ TWA; RESPIRABLE FRACTION: 5 MG/M ³ TWA	10 MG/M ³ TWA (TOTAL DUST/PARTICULATE)	No STEL	Esto no está aquí
Propietario	Proprietary Surfactant		No TLV	No STEL	Esto no está aquí

IX. PROPIEDADES QUÍMICAS Y FÍSICAS

Estado físico:	Líquido
Color:	Verde
Olor:	Leve
Solubilidad en agua:	Completo/a; 100%
Elementos químicos volátiles orgánicos, porcentaje por peso:	4.76
Volátiles, porcentaje por volumen:	5.66
VOC lb/gal	0.42
Gravedad específica:	1.07
Densidad aparente (lb/Gal):	8.91
Densidad aparente (kg/L):	1.07

X. ESTABILIDAD Y REACTIVIDAD

Estabilidad:	Estable bajo condiciones normales.
Condiciones que se deben evitar:	Ninguno/a conocido/a.

Materiales que se
deben evitar por
incompatibilidad
química:

Agentes oxidantes fuertes

XI. INFORMACIÓN TOXICOLÓGICA

Datos sobre componentes toxicológicos (NIOSH):

Número CAS	Nombre químico	LD50/LC50
111-76-2	Ethylene glycol mono-n-butyl ether	Inhalation LC50 Rat 2.21 mg/L 4 h; Inhalation LC50 Rat 450 ppm 4 h; Oral LD50 Rat 470 mg/kg; Dermal LD50 Rat 2270 mg/kg; Dermal LD50 Rabbit 220 mg/kg
56-81-5	Glycerine	Oral LD50 Rat 12600 mg/kg; Dermal LD50 Rat >21900 mg/kg
Propietario	Proprietary Surfactant	Oral LD50 Rat 4 g/kg; Dermal LD50 Rabbit 6540 µL/kg

XII. INFORMACIÓN ECOLÓGICA

Ecotoxicidad	No hay datos disponibles sobre la preparación misma. No permitir que entre en los desagües o cursos de agua.
USDOT Marine Pollutants	Esto no está aquí
USDOT Severe Marine Pollutants	Esto no está aquí

XIII. CONSIDERACIONES SOBRE ELIMINACIÓN DE DESECHOS

Descripción de los desechos del producto usado: Métodos de eliminación:	No se espera que el material usado o desechado sea un desperdicio peligroso.
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XIV. INFORMACIÓN SOBRE LA REGLAMENTACIÓN

Estado TSCA	Todos ingredientes de este producto son listados o son excluidos de la lista en el U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
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Nombre químico	No CAS	Regulación	Porcentaje
Esto no está aquí		CERCLA	
2-Butoxyethanol	111-76-2	NPRI (Cdn)	4.75
Esto no está aquí		PROP 65	
Glycol Ethers N-230	111-76-2	SARA 313	4.75
Magnesium nitrate (Nitrate Compound)	10377-60-3	SARA 313	2.78
Esto no está aquí		SARA EHS	

Los siguientes artículos requieren una notificación de exportación para TSCA

Nombre químico	Sección 12b de la lista TSCA
Esto no está aquí	

Este producto ha sido clasificado de acuerdo al criterio de peligro de las Regulaciones Canadienses sobre Productos Controlados y la Hoja de Datos de Seguridad de Materiales contiene información requerida por las Regulaciones sobre Productos Controlados.

XV. INFORMACIÓN DE TRANSPORTE

49CFR/TDG - Bulk:	No Restringido/a
IATA - Bulk:	No Restringido/a
IMDG - Bulk:	No Restringido/a

XVI. INFORMACIÓN ADICIONAL

Referencias:

MAJESTA 606

Descargo de responsabilidad: Varn International, Inc. a Flint Group Company ha preparado estas "Hojas de seguridad de materials" (MSDS) cumpliendo con la norma 29 CFR 1910.1022, se sobreentiende que sus clientes pueden utilizar estos MSDS para cumplir con dicha seccion y se presume que los datos suministrados aqui son exactos en la fecha en que se suministran; Sin embargo, este MSDS no constituye una garantia al respecto.

12/24/2008



ALLIED PRESSROOM CHEMISTRY MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : POWDERED SYSTEMS CLEANER

(Detergent mixtures for cleaning re-circulating water systems)

MANUFACTURER'S NAME: ALLIED PRESSROOM CHEMISTRY.

STREET ADDRESS

2040 LEE STREET, HOLLYWOOD, FLORIDA, 33020, USA

OFFICE TELEPHONE:
800-327-8487

FAX:
954-923-6462

24 HR. EMERGENCY TELEPHONE
800-424-9300 CHEMTREC

THIS IS AN INDUSTRIAL CHEMICAL PRODUCT. ALL INDUSTRIAL CHEMICAL PRODUCTS POSE AN INHERENT HEALTH RISK. BEFORE USE ALWAYS READ COMPLETE LABEL AND MSDS FOR SAFE HANDLING PROCEDURES

0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe

HEALTH HAZARD: 1

FIRE HAZARD: 0

REACTIVITY: 0

PROTECTIVE EQUIPMENT: C



Safety Glasses



Gloves



Protective Apron

DO NOT BREATHE VAPORS. DO NOT GET IN EYES, SKIN. DO NOT GET ON CLOTHING. DO NOT INGEST

SECTION 2 - INGREDIENT INFORMATION

INGREDIENTS	%	CAS NUMBER	HAZARD DATA
* These ingredients are subject to the reporting requirements of SARA 313 and 40 CFR 372			
Consists of a mixture of detergent salts			

ALL INGREDIENTS ARE LISTED IN THE US TOXIC SUBSTANCE CONTROL ACT (TSCA)

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE Solid powder	ODOR AND APPEARANCE White granular powders negligible odor	WATER SOLUBILITY Soluble	PH Step 1 is mildly alkaline Step 2 is mildly acidic	SPECIFIC GRAVITY 1.0
VAPOR PRESSURE (MM Hg) Negligible @ 20°C	VAPOR DENSITY (AIR=1) >1	EVAPORATION RATE (Butyl acetate = 1) Not applicable	BOILING POINT (°F) Not applicable	V.O.C.'s 0 % by Mass 0 lb per Gallon (0 g/l)

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		IF YES, UNDER WHICH CONDITIONS? • Not applicable	
EXTINGUISHING MEDIA Not applicable		SPECIAL FIRE FIGHTING PROCEDURES: Use self contained breathing apparatus if needed.	
FLASHPOINT (°F) AND METHOD None by TCC		UPPER FLAMMABLE LIMIT (% BY VOLUME) : Unknown	LOWER FLAMMABLE LIMIT (% BY VOLUME): Unknown
AUTOIGNITION TEMPERATURE (°C) Not known		HAZARDOUS COMBUSTION PRODUCTS Oxides of carbon .	
EXPLOSION DATA • NOT KNOWN		SENSITIVITY TO IMPACT NO	SENSITIVITY TO STATIC DISCHARGE NO

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERISATION None
INCOMPATIBILITY WITH OTHER SUBSTANCES None known		
HAZARDOUS DECOMPOSITION PRODUCTS: In contact with open flame or incandescent material will liberate carbon dioxide, carbon monoxide		This product is not photochemically reactive



ALLIED PRESSROOM CHEMISTRY

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER • ALLIED POWDERED SYSTEMS CLEANER

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY

SKIN CONTACT ■

SKIN ABSORPTION □

EYE CONTACT ■

INHALATION ■

INGESTION ■

ACUTE EXPOSURE TO PRODUCT:

Inhalation – breathing of dusts will irritate nasal passages.

Eye - Will cause severe irritation, burning, redness and tearing. Step 1 is a strong detergent mixture. May result in corneal damage

Skin - Can cause irritation, on prolonged contact due to strong detergency of Step 1

Ingestion causes irritation of the digestive tract.

CHRONIC EXPOSURE TO PRODUCT: Prolonged skin contact may aggravate an existing dermatitis.

CARCINOGENICITY: No ingredient present at greater than 0.1 % is identified as a carcinogen by OSHA, IARC or NTP

TARGET ORGAN EFFECTS: Eye, skin irritant

EMERGENCY FIRST AID PROCEDURES:

EYES: Flush with running water for at least 15 minutes. Seek medical attention.

SKIN: wash affected area with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: Remove victim to fresh air. Administer oxygen and/or artificial respiration if breathing difficulties occur. Seek medical attention.

INGESTION: Do not induce vomiting. Dilute by drinking water and seek immediate medical attention.

SECTION 7 - PREVENTATIVE MEASURES

GLOVES

Nitrile for incidental, non-immersion contact.

RESPIRATOR: Use NIOSH approved SCBA in emergency situations or confined areas.

EYE (SPECIFY)

Splash proof goggles or face shield

CLOTHING : Boots, aprons , or chemical suits should be used when necessary to prevent skin contact.

ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS) : No special requirements

LEAK AND SPILL PROCEDURE: Contain spill. Take precautions to prevent contamination of ground and surface waters. Recover spilled material using absorbent material such as vermiculite and sweep into closed containers for disposal.

WASTE DISPOSAL: Contaminated vermiculite or porous surface must be disposed of in a permitted waste facility. Recovered liquids may be reprocessed or incinerated in a permitted waste facility. In all cases material should be disposed of in accordance with all applicable regulations.

HANDLING PROCEDURES AND EQUIPMENT: Keep container closed when not in use. Store only in closed, properly labeled containers. Store in a cool, dry, well ventilated area. Treat empty containers as containing hazardous residues. Use product in a manner that does not spread dust clouds in the atmosphere.

SECTION 8 - ADDITIONAL INFORMATION

CALIFORNIA PROPOSITION 65: This regulation does not address "de minimis" levels. Therefore even trace amounts of chemicals on these lists must be identified. Trace quantities refer low levels of materials whose exact concentrations may not always be determined because of their minuteness.

This product contains the following chemicals known by the state of California to cause cancer: None

This product contains the following chemicals known by the state of California to cause reproductive harm : None

SHIPPING INFORMATION: Not regulated for shipping purposes

SECTION 9 – PREPARATION AND DATE OF MSDS

PREPARED BY (GROUP DEPARTMENT, ETC)

ALLIED PRESSROOM CHEMISTRY TECHNICAL SERVICES DEPARTMENT

PHONE NUMBER

1-800-327-8487

DATE

October 2005

The above information is believed to be correct as of the date hereof and is based on data supplied by raw material suppliers, however, no warranty of merchantability, fitness for use, or any other warranty is expressed or is to be implied regarding the accuracy of these data, the results to be obtained from the use of the material, or the hazards connected with each use. Since the information contained herein may be applied under conditions beyond our control and with which we are unfamiliar, and since the data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its' use. This information is furnished on the condition that the person receiving it shall make his own determination as to the suitability of the material for his particular purpose and on the condition that he assume risk of his use thereof.

Material Safety Data Sheet
MSDS: 11993 - REVITOL 02210
Plant #: 401 Inserted 4-22-93
Status: Pending

Formula: NOT GIVEN
Specification: NOT GIVEN
Synonyms:
NOT GIVEN
Stock Items: NOT GIVEN

File Number: NOT GIVEN
Keyword: NOT GIVEN

Manufacturer

VARN PRODUCTS
905 S. WESTWOOD
ADDISON, IL 60101

Phone: 800-336-8276
Emergency:

Supplier

VARN PRODUCTS
905 S. WESTWOOD
ADDISON, IL 60101

Phone: 800-336-8276
Emergency:

Physical/Chemical Characteristics

Boiling Point: GT 11.7
Melting Point: NG
Freezing Point: NG
Pour Point: NG
Softening Point: NG
Specific Gravity: EQ 1.0
Vapor Pressure: NA
Vapor Density: NA
Percent Volatiles: NG
Evaporation Rate: LT 1
pH: NG
Molecular Weight: NG
Viscosity: NG
Solubility in Water ..: 60%.
Odor/Appearance/Other Characteristics:
STRAW COLORED LIQUID / MILD ODOR / MATERIAL VOC: 0.97 LB/GL (116 G/L).

CC - ON G/L P.S.

ETHER = 1, SLOWER.

Fire and Explosion Data

Closed Cup Flash Pt. ..: EQ 116 F TAG CC.
Open Cup Flash Point ..: NG
Fire Point: NG
Auto Ignition: NG
Lower Explosion Limit : EQ 2.0
Upper Explosion Limit : EQ 12.0

Shipping Regulations

UN/NA Number: NG NA1993
DOT Hazard Class: II COMBUSTIBLE LIQ
Shipping Label: NOT GIVEN
Shipping Name: COMBUSTIBLE LIQUID N.O.C. (100% VARNOL)

Material Safety Data Sheet
MSDS: 11955 - REVITOL 02220
Plant #: 404 Inserted

MSDS: 11955

Page 2

Prepared

Preparer's Name & Title: VARN PRODUCTS CO.
Preparation Date: 10/30/92

Component(s):

ETHYLENE GLYCOL

OSHA PEL: 50 ppm NG mg/m3
ACGIH TLV: 50 ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: EQ 2%
Note: PEL & TLV: CEILING

2-BUTOXY ETHANOL

OSHA PEL: 25 ppm NG mg/m3
ACGIH TLV: 25 ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: BT 4% CAS No.: 111762
Note: PEL & TLV: SKIN / VAPOR PRESSURE: 0.9 MM HG @ 77F.

ISOPROPANOL

OSHA PEL: 400 ppm NG mg/m3
ACGIH TLV: 400 ppm NG mg/m3
STEL: 500 ppm NG mg/m3
Percent of Product: EQ 5% CAS No.: 67530
Note: VAPOR PRESSURE: 31.2 MM HG @ 68 F.

Text Section(s)

MANUFACTURER IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

PRODUCT NAME: REVITOL

PRODUCT CODE: 02220

HMIS CODES: H - 1 F - 2 R - 0 P - 2

EMERGENCY PHONE: (800) 421-9000

INFORMATION PHONE: (800) 326-8275

MANUFACTURER'S NAME & ADDRESS:

Material Safety
MSDS: 11955 - METAL
Plant #: 404 Inert

VARN PRODUCTS
905 SOUTH WELFORD
ADDISON, ILLINOIS 60101

HAZARDOUS INGREDIENTS/SARA III INFORMATION

SEE COMPONENT PAGE(S) FOR ADDITIONAL INFORMATION.

HAZARDOUS COMPONENTS:

*ETHYLENE GLYCOL
*2-BUTOXY ETHANOL
ISOPROPANOL

* Indicates toxic chemical(s) subject to the reporting requirements of
Section 313 of Title III and of 40 CFR 372.

ALL INGREDIENTS ARE LISTED IN THE EPA TSCA INVENTORY.

PHYSICAL/CHEMICAL CHARACTERISTICS

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FIRE AND EXPLOSION HAZARD DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES: AS IN ANY FIRE, WEAR SELF-CONTAINED
BREATHING APPARATUS (MSHA/NIOSH APPROVED) AND FULL PROTECTIVE GEAR.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: AVOID CONDITIONS OF EXCESSIVE HEAT TO INCREASE SHELF
LIFE.

INCOMPATIBILITY (MATERIALS TO AVOID): AVOID STRONG OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: BURNING WILL PRODUCE OXIDES OF CARBON AND DENSE SMOKE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: NO HAZARD IN NORMAL INDUSTRIAL USE.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: PROLONGED OR REPEATED CONTACT WITH SKIN MAY CAUSE IRRITATION. CONTACT MAY CAUSE EYE IRRITATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: HARMFUL IF ABSORBED THROUGH THE SKIN. SKIN CONTACT WILL RESULT IN ABSORPTION AND POTENTIALLY CONTRIBUTE TO THE OVERALL EXPOSURE TO THE CHEMICAL 2-BUTYNY ETHANOL.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: INGREDIENTS IN THIS PRODUCT ARE TOXIC. INGESTION MAY CAUSE NAUSEA, MODERATE GASTRO-INTESTINAL IRRITATION, DIARRHEA AND POSSIBLE DAMAGE TO VITAL ORGANS. FOLLOW FIRST AID PROCEDURES.

HEALTH HAZARDS (ACUTE AND CHRONIC): THIS PRODUCT MAY PRODUCE MILD TO MODERATE IRRITATION UPON CONTACT WITH EYES AND MILD IRRITATION WITH SKIN. ETHYLENE GLYCOL HAS BEEN IDENTIFIED AS A PROBABLE BIRTH DEFECT HAZARD BASED ON LABORATORY ANIMAL DATA.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS.

NTP: NO

IARC MONOGRAPHS: NO

OSHA REGULATED: NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: SKIN CONTACT MAY AGGRAVATE PRE-EXISTING DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH WATER FOR 15 MINUTES. SEE MEDICAL STAFF IF NO IRRITATION PERSISTS.

Material Safety Data Sheet

MSDS: 11955 - REVISED 02/03

Plant #: 104 Inserted 12/27/02

NOG 11/98

SKIN: WASH WITH SOAP AND WATER.

INHALATION: MOVE TO FRESH AIR.

INGESTION: IF VICTIM IS UNCONSCIOUS, INDUCE VOMITING AS DIRECTED BY MEDICAL PERSONNEL. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SOAK UP ON ABSORBENT MATERIAL OR TRANSFER LIQUID INTO A CLOSED CONTAINER FOR LATER DISPOSAL. DIKE SPILL AND KEEP FROM ENTERING SEWER.

WASTE DISPOSAL METHOD: DILUTED MATERIAL MAY MEET SEWER DISPOSAL GUIDELINES IN SOME LOCALITIES. DO NOT POUR UNDILUTED CONCENTRATE, AS SUPPLIED, DOWN SEWER. CONTACT A LOCAL SEWER AUTHORITIES BEFORE DISPOSAL.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE IN A COOL, DRY AREA AWAY FROM SUNLIGHT AND EXCESS HEAT. KEEP FROM FREEZING. AVOID BREATHING MIST OR VAPORS. AVOID SKIN CONTACT.

OTHER PRECAUTIONS: WHEN TRANSFERRING OR USING THIS PRODUCT, WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT.

CONTAINS NO CHEMICALS FOUND ON THE CALIFORNIA PROPOSITION 65 LIST.

PROPER SHIPPING NAME: COMBUSTIBLE LIQUID N.O.S. (ISOPROPANOL)

UN NUMBER: NA 1993

PACKING GROUP: III

PRODUCT IS CLASSIFIED AS AN OSHA CLASS II COMBUSTIBLE LIQUID

CONTROL MEASURES

RESPIRATORY PROTECTION: NO SPECIAL PROTECTION IS REQUIRED UNDER NORMAL CONDITIONS OF USE.

VENTILATION: GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT TO CONTROL AIRBORNE LEVELS.

PROTECTIVE GLOVES: USE GLOVES SUCH AS BUTYL OR NITRILE RUBBER.

EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS.

Material Safety Data Sheet

MSDS 11-95

MSDS: 11955 - REVITOL 22100

Plant #: 424 Insertco ----- Page 6

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: NOT NECESSARY.

WORK/HYGIENIC PRACTICES: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT.

SPECIAL NOTES

DISCLAIMER: THE INFORMATION ON THIS MSDS IS ACCURATE AS OF THE DATE SHOWN IN THE DATA PAGES. SINCE THE USE OF THIS PRODUCT IS NOT IN THE CONTROL OF VARN, IT IS THE USER'S RESPONSIBILITY TO DETERMINE WHAT CONSTITUTES SAFE USAGE FOR A PARTICULAR PURPOSE. THIS FORM MAY BE REPRODUCED LOCALLY IN ANY QUANTITIES NECESSARY TO MEET YOUR REQUIREMENTS.

End of MSDS



Material Safety Data Sheet

acc. to ISO/DIS 11014

Page 1/4

Printing date 10/09/2008

Reviewed on 10/09/2008

1 Identification of substance

- **Product details**
- **Trade name: Velocity Plate Cleaner**
- **Article number: C514**
- **Application of the substance / the preparation Surface cleaning**
- **Manufacturer/Supplier:**
Printers' Service
26 Blanchard Street
Newark, NJ 07105
- **Information department: 1-973-589-7800 (MSDS revised 10/9/2008)**
- **Emergency information: CHEMTREC (24 hr) 1-800-424-9300**

2 Composition/Data on components

- **Chemical characterization**
- **Description: Mixture of the substances listed below with nonhazardous additions.**
- **Dangerous components:**

64741-41-9 Naphtha (petroleum), heavy straight-run	60 - 70%
Xn, Xi, R 36/38-65	
7558-80-7 sodium dihydro phosphate	5 - 10%
Xi, R 36	
56-81-5 glycerol	5 - 10%
- **Additional information: For the wording of the listed risk phrases refer to section 16.**

3 Hazards identification

- **Hazard description:**
Harmful
- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Flammable
Harmful by inhalation, in contact with skin and if swallowed
Irritating to eyes, respiratory system and skin
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**
Health = 1
Fire = 2
Reactivity = 0
- **HMS-ratings (scale 0 - 4)**
Health = 1
Fire = 2
Reactivity = 0

4 First aid measures

- **General information:**
Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.

USA

(Contd. on page 2)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/09/2008

Reviewed on 10/09/2008

Trade name: Velocity Plate Cleaner

(Contd. of page 1)

5 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
 - **Information for safe handling:**
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
56-81-5 glycerol
PEL 15*, 5** mg/m³
*Total dust **Respirable fraction
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
 - **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
 - **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
 - **Protection of hands:**
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
 - **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 3)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Page 3/4

Printing date 10/09/2008

Reviewed on 10/09/2008

Trade name: **Velocity Plate Cleaner**

(Contd. of page 2)

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

General information

Form: Fluid
Color: Clear
Odor: Characteristic

Change in condition

Melting point/Melting range: N/A
Boiling point/Boiling range: 100°C (212°F)

Flash point: 42°C (108°F)

Ignition temperature: 400.0°C (752°F)

Auto Igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible

Explosion limits:

Lower: 0.7 Vol %
Upper: 6.0 Vol %

Vapor pressure at 20°C (68°F): 17.8 hPa (13 mm Hg)

Density at 20°C (68°F): 0.91 g/cm³

Solubility in / Miscibility with

Water: Dispersible.

Additional information:

Vapor pressure minus water - 4.12 hPa (3.1 mm Hg)

VOC 560.1 g/l / 4.67 lb/gal

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions: No dangerous reactions known.

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

64741-41-9 Naphtha (petroleum), heavy straight-run

Oral LD50 25000 mg/kg (rat)

Inhalative LC50/4 h 700 mg/l (rat)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations Harmful

12 Ecological information

General notes:

Water hazard class 1 (Self-assessment) slightly hazardous for water

(Contd. on page 4)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 10/09/2008

Reviewed on 10/09/2008

Trade name: **Velocity Plate Cleaner**

(Contd. of page 3)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations
- **Recommended cleansing agent:** Water, if necessary with cleansing agents

14 Transport Information

- **Hazard class:** 3
- **Identification number:** NA1993
- **Packing group:** III
- **Proper shipping name (technical name):** COMBUSTIBLE LIQUID, N.O.S (Naphtha (petroleum), heavy straight-run)
- **Packaging group:** III

15 Regulations

- **Sara**
- **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.
- **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.
- **TSCA (Toxic Substances Control Act):**
All ingredients are listed.
- **Proposition 65**
- **Chemicals known to cause cancer:**
None of the ingredients is listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)**
None of the ingredients is listed.
- **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
- **NTP (National Toxicology Program)**
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.
- **MAK (German Maximum Workplace Concentration)**
None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.
- **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.
- **National regulations:**
- **Water hazard class** Water hazard class 1 (Self-assessment) slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department Issuing MSDS:**
- **Contact:** CHEMTREC (24hr) 1-800-424-9300, Printers Service 1-973-589-7800
- * Data compared to the previous version altered.

MATERIAL SAFETY DATA SHEET

WASH V-120

Page: 1

Revised: January 03, 2005

PRODUCT CODE: B010003

HMIS CODES: H F R P

1 2 0 X

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Day International Chemical Products Div.
ADDRESS : 905 South Westwood Avenue
Addison, Illinois 60101

EMERGENCY PHONE: 800-424-9300

INFORMATION PHONE: 800-336-8276

NAME OF PREPARER: DAY Chemical Prod. Div.

DATE PRINTED: 01/03/2005

REASON REVISED: Update; Supersedes All Previous Revisions.

SECTION 2 - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR MM HG @ TEMP	PRESSURE	WEIGHT PERCENT
Petroleum Naphtha	64742-47-8	2.8	68°F	43
OSHA PEL: 500ppm TWA, ACGIH® TLV®: N/E, Mfg.: 100ppm				
Petroleum Naphtha	64742-95-6	2.7	68°F	32
OSHA PEL: N/E, ACGIH® TLV®: N/E, Mfg: 50ppm				
* 1,2,4-Trimethyl Benzene	95-63-6			12
Dipropylene Glycol Methyl Ether	34590-94-8	0.17	68°F	6
OSHA PEL: 100ppm, ACGIH® TLV®, TWA: 100ppm, STEL: 150ppm				
p-mentha-1,8-diene	5989-27-5	2.0	68°F	2
OSHA PEL: N/E, ACGIH® TLV®: N/E, Mfg: 125ppm				
* Xylenes	1330-20-7			1
Hazardous Air Pollutant				

* Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372. All ingredients are listed on the EPA TSCA Inventory.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE/POINT: 310°F - 356°F
VAPOR DENSITY: Heavier than air.
EVAPORATION RATE: Slower than n-Butyl Acetate.
V.O.C. (EPA METHOD 24): 6.77 lb/gal
VAPOR PRESSURE (MM HG @ 20°C): 2.6
SOLUBILITY IN WATER: Emulsible
APPEARANCE AND ODOR: Yellow Liquid - Petroleum Odor

SPECIFIC GRAVITY (H2O=1): .83

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 106°F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0%

METHOD USED: TAG CC
UPPER: 6.5%

EXTINGUISHING MEDIA:

Foam, Alcohol Foam, CO2, Dry Chemical, Water Fog

SPECIAL FIREFIGHTING PROCEDURES:

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) and full protective gear. Water may not be effective to extinguish fire. Use water spray to cool fire-exposed containers and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Treat as Petroleum Fire

MATERIAL SAFETY DATA SHEET

WASH V-120

Page: 2
Revised: January 03, 2005

SECTION 5 - REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID:

Avoid heat, sparks, flame and other sources of ignition.

INCOMPATIBILITY (MATERIALS TO AVOID):

Avoid mixing with strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Burning will produce oxides of carbon and dense smoke.

HAZARDOUS POLYMERIZATION:

Will Not Occur

SECTION 6 - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Breathing high concentrations of vapors will cause irritation of the nose and throat. Signs of central nervous system depression such as headache, drowsiness, dizziness and nausea may be experienced with overexposure.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Skin and eye contact may cause moderate to severe irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Single prolonged exposure is not likely to result in the product being absorbed through the skin in harmful amounts.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Ingestion of this product will cause nausea, gastro-intestinal irritation, diarrhea and possible damage to vital organs. Follow first aid procedures.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Repeated or abusive breathing of concentrated vapors may effect pulmonary, cardiovascular, and central nervous systems. Repeated skin contact will dry out and crack skin. Aspiration hazard if swallowed; aspiration of product into the lungs can cause chemical pneumonitis.

CARCINOGENICITY: NTP CARCINOGEN: No

IARC MONOGRAPHS: No

OSHA REGULATED: No

This product contains no known carcinogens.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Skin contact may aggravate pre-existing dermatitis. Inhalation of vapors may aggravate pre-existing asthma like conditions.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air. Give oxygen if breathing is labored. Apply artificial respiration if not breathing. Seek medical help.
SKIN: Remove all contaminated clothing and shoes. Wash with soap and water. Do not reuse clothing and shoes until cleaned. **EYES:** Flush eyes with plenty of water while removing any contact lenses. Hold eyelids open and continue flushing for at least 15 minutes.
INGESTION: DO NOT INDUCE vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention immediately.

MATERIAL SAFETY DATA SHEET

WASH V-120

Page: 3

Revised: January 03, 2005

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Eliminate all ignition sources. Spills should be diked and must be kept from entering the sewer. Soak up with absorbent or transfer liquid into a closed container for later disposal. Use spark-proof tools and explosion proof equipment.

WASTE DISPOSAL METHOD:

If this product as supplied, becomes a waste it is regulated by RCRA as Ignitable Waste, EPA I.D. #D001. Suitable methods of disposal include reclamation and fuel blending. Contact a Licensed Hazardous Waste Hauler for more information.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Containers should be grounded and bonded before transferring product. Store in the original closed container away from sunlight, excess heat, sparks, flames and other sources of ignition. Avoid skin or eye contact. Avoid breathing vapors. When transferring or using this product, wear proper personal protective equipment. Store and handle as a Combustible Liquid.

OTHER PRECAUTIONS/DOT INFORMATION:

DOT Proper Shipping Name: Combustible Liquid n.o.s. (Naphthal), Hazard Class: Combustible Liquid, ID No.: NA1993, Packing Group: III
Non-bulk packagings not regulated as per 49CFR 173.150 (1)(2). Product is classified as an OSHA Class II Combustible Liquid.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION:

The use of respiratory protection is advised when concentrations exceed the established exposure limits in SECTION 2. Depending on the airborne concentration, use a respirator with appropriate organic vapor cartridge (NIOSH approved).

VENTILATION:

If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits in SECTION 2, additional general ventilation or local exhaust systems may be required.

PROTECTIVE GLOVES:

Wear solvent resistant gloves made of nitrile or butyl rubber.

EYE PROTECTION:

Wear safety glasses with side shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A personal protective rating of X means you must see your supervisor for guidance. OSHA regulations (29CFR Part 1910, Subpart H) require employers to evaluate Personal Protective Equipment requirements in the workplace.

WORK/HYGIENIC PRACTICES:

Wash with soap and water after product contact with skin.

SECTION 9 - DISCLAIMER

The information on this MSDS is believed to be accurate as of the date shown in SECTION 1. Since the use of this product is not under the control of DAY Chemical Products Division, it is the user's responsibility to determine what constitutes safe usage for a particular product. This form may be reproduced in quantities necessary to meet your requirements.

SAFETY DATA SHEET

PLATE CLEANER & PRESERVER

DATE: 1/1/2014

1. CHEMICAL NAME AND COMPANY IDENTIFICATION

Formulated/Manufactured By: Tower Products, Inc.
2703 Freemansburg Avenue
Easton, PA 18045

Information Telephone Number: 1-800-527-8626 or 610-253-6206

For Chemical Spill Emergency Call: CHEMTREC: 1-800-424-9300

Product Name: PLATE CLEANER & PRESERVER
(Plate Cleaner, Finisher and Preserver for CTP Plates)

CAS Number: Mixture - Not Established

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable Liquids (Category 4)
Skin Irritation (Category 3)
Eye Irritation (Category 2B)

GHS label elements, including hazard and precautionary statements

Pictogram(s) None

Signal Word WARNING!

Hazard statement(s)

H227: COMBUSTIBLE LIQUID.
H316: CAUSES MILD SKIN IRRITATION.
H320: CAUSES EYE IRRITATION.

Precautionary statement(s)

Prevention:

P210: KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES AND OTHER IGNITION SOURCES.
NO SMOKING.

P264: WASH SKIN THOROUGHLY AFTER HANDLING.

Response:

P370+P378: IN CASE OF FIRE: USE DRY CHEMICAL OR CARBON DIOXIDE TO EXTINGUISH.

P302+P352: IF ON SKIN: WASH WITH PLENTY OF WATER.

P305+P351+P338: IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.

Storage:

P403+P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

Disposal:

P501: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/REGIONAL/NATIONAL REGULATIONS.

HMIS Classification

Health Hazard: 2

Flammability: 2

Physical Hazard: 0

Personal Protection: B

SAFETY DATA SHEET

PLATE CLEANER & PRESERVER

DATE: 1/1/2014

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component(s)</u>	<u>CAS Number</u>	<u>*Concentration (weight)</u>
Aliphatic Hydrocarbon	64742-48-9	10-20%
Corn Syrup	68131-37-3	1-10%
Polyethylene Glycol 300	25322-68-3	1-10%

* In accordance with paragraph (i) of §1910.1200, exact chemical percentages (concentration) of composition have been withheld as a trade secret.

4. FIRST AID MEASURES

Exposure Routes: Inhalation, Ingestion, Skin

Eye Contact: Flush with large volume of water for at least 15 minutes. Get immediate medical attention.

Inhalation: Remove to fresh air. Get immediate medical attention.

Ingestion: Get immediate medical attention. Do not induce vomiting.

Skin Contact: Flush area with large amounts of water for at least 15 minutes. Get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical or carbon dioxide.

Specific Hazards: Combustible Liquid. Upon combustion, the product may form carbon monoxide and other organic compounds. Product containers may rupture from vapor pressure when exposed to heat from fire.

Special protective equipment for fire-fighters: Use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions and protective equipment:

Respiratory Protection: Use supplied air equipment or respirators with proper NIOSH approved cartridges.

Protective Gloves: Impervious or chemical resistant gloves (consult safety equipment supplier).

Eye Protection: Chemical splash goggles recommended against potential eye contact.

Other Protective Clothing and Equipment: Safety shoes and aprons recommended.

Methods for Clean-Up:

Minor Spills: Absorb material with ground clay, vermiculite, sand, or similar absorbent material and place into containers for disposal according to local and/or state regulations.

Major Spills: Dike and contain spill. Eliminate potential sources of ignition, and shut off source of spill if possible. Remove liquid by chemical vacuum, absorbent material, or other safe and approved methods, and place into containers for disposal according to local and/or state regulations. Flush area with water to remove residue, and remove flushed solutions as above.

7. HANDLING AND STORAGE

Handling: Combustible Liquid - empty containers can be hazardous and contain explosive vapors. Plastic or stainless steel faucets are recommended. Do not reuse containers. Ground fixed equipment. Bond and ground transfer equipment and containers.

Storage: Store in a cool, dry, ventilated area, away from incompatible substances. Keep containers closed when not in use.

SAFETY DATA SHEET

PLATE CLEANER & PRESERVER

DATE: 1/1/2014

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines:		OSHA	ACGIH	ACGIH	OTHER
COMPONENT	CAS No.	PEL/TWA	TLV/TWA	TLV/STEL	RATING
Aliphatic Hydrocarbon	64742-48-9	100ppm(1)	100ppm		
Corn Syrup	68131-37-3	N/E	N/E		
Polyethylene Glycol	25322-68-3	N/E	N/E		10mg/m3 (WEEL)

(1) Based on 1989 VPEL for Stoddard Solvent; current PEL is 500ppm.

Exposure Controls: Avoid open electrical sources near product vapor areas.

Personal Protection Equipment:

Eyes: Chemical splash goggles recommended.

Skin and body: Impervious or chemical resistant gloves (consult safety equipment supplier).

Respiratory: Ventilation in work area should be sufficient to maintain atmosphere with vapor level below lowest listed TLV. If TLV's are exceeded, use a respirator with appropriate NIOSH approved cartridges or supplied air equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Milky white liquid.

Odor: Mild odor

pH: 3.7

Melting Point: N/A

Boiling Point: > 212° F (>100° C)

Flash Point: (Tag Closed Cup Method) 148° F

Flammable Limits:

LEL: N/A

UEL: N/A

Vapor Pressure: (mmHg) Less than 1.0mmHG at 68 degrees F

Vapor Density: (Air = 1) N/A

Specific Gravity: (Water = 1) 0.99

Solubility in water: Emulsifies

Maximum VOC Content: (EPA Method 24) 0.83 Lb/Gal (100 Gm/L)

Maximum VOC %: 12%

Odor Threshold: N/A

Evaporation Rate: N/A

Relative Density: N/A

Partition Coefficient: N-Octano/Water: N/A

Auto-ignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Incompatible Materials: Avoid strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and other compounds during combustion.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid exposure to high heat sources, electrical and welding arcs, open flame and strong oxidizing agents.

Warning: Spontaneous combustion may occur when solvent soaked combustible materials (paper, cotton etc.) are allowed to stand in confined areas.

SAFETY DATA SHEET

PLATE CLEANER & PRESERVER

DATE: 1/1/2014

11. TOXICOLOGICAL INFORMATION**(ATE) FOR MIXTURE:**

Specific tests have not been conducted on this product. Our evaluations based on information from the ingredients and technical literature. Data for this material has been used to estimate the symptoms and effects of exposure.

Oral LD50:

LD50 Oral - No data available

Dermal LD50:

LD50 Dermal - $\geq 16,949$ mg/kg

Inhalation LC50:

LC50 Inhalation - No data available

Other information on Acute Toxicity:

No data available

Routes of exposure: Inhalation, Ingestion, Skin

Acute: Overexposure may lead to skin irritation, eye irritation, and central nervous system depression, leading to headaches, nausea and unconsciousness.

Chronic: Overexposure in high concentrations may produce central nervous system depression, dermatitis and eye irritation.

Signs and Symptoms of Exposure: Overexposure may lead to dizziness, headaches, dermatitis and eye irritation.

Medical Conditions Aggravated by Exposure: Preexisting eye, skin, or respiratory disorders may be aggravated by exposure.

Carcinogenicity (NTP, IARC, OSHA): Components of this product have not shown any evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in the soil: No data available

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS**Waste disposal methods:**

Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

14. TRANSPORTATION INFORMATION

<u>U.S. D.O.T. DESIGNATION</u>	<u>ID NUMBER</u>	<u>HAZARD CLASS</u>	<u>PACKING GROUP</u>
Cleaning Liquid. Not Regulated			
 <u>U.S. D.O.T. DESIGNATION - BULK</u>			
Combustible Liquid, N.O.S. (contains Petroleum Naphtha)	NA1993	COMB	III

SAFETY DATA SHEET

PLATE CLEANER & PRESERVER

DATE: 1/1/2014

15. REGULATORY INFORMATION

Regulatory Information: This information may be useful in complying with various federal and state regulations: Components present in this product at a level which could require reporting under EPA Regulation 40CFR302 (CERCLA) Section 102 and EPA Regulation 40CFR372 (SARA) 313: None.

Product may contain components which are further regulated by state and/or local agencies - Consult Appropriate Agencies.

Notification status:

U.S.A.: Toxic Substances Control Act (TSCA) Y

Canada: Domestic Substances List (DSL): Y

16. OTHER INFORMATION

For More Information, Consult Tower Products, Inc.

This Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied Is Made.

Date of Preparation: January 1, 2015

SAFETY DATA SHEET

INFINITY WASH HMK-1 WM

DATE: 1/1/2015

1. CHEMICAL NAME AND COMPANY IDENTIFICATION

Formulated/Manufactured By: Tower Products, Inc.
2703 Freemansburg Avenue
Easton, PA 18045

Information Telephone Number: 1-800-527-8626 or 610-253-6206

For Chemical Spill Emergency Call: CHEMTREC: 1-800-424-9300

Product Name: INFINITY WASH HMK-1 WM
(FOGRA Approved Wash for Sheetfed Presses)

CAS Number: Mixture - Not Established

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable Liquids (Category 4)
Aspiration Hazard (Category 1)
Specific Target Organ Toxicity - Single Exposure (Category 3)
Skin Irritation (Category 2)
Eye Irritation (Category 2B)

GHS label elements, including hazard and precautionary statements



Pictogram(s)

Signal Word DANGER!

Hazard statement(s)

H227: COMBUSTIBLE LIQUID.
H304: MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
H336: MAY CAUSE DROWSINESS OR DIZZINESS.
H315: CAUSES SKIN IRRITATION.
H320: CAUSES EYE IRRITATION.

Precautionary statement(s)

Prevention:

P210: KEEP AWAY FROM HEAT/HOT SURFACES/SPARKS/OPEN FLAMES AND OTHER IGNITION SOURCES.
NO SMOKING.
P261: AVOID BREATHING FUME/MIST/DUST/GAS/VAPORS/SPRAY.
P280: WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
P264: WASH SKIN THOROUGHLY AFTER HANDLING.

Response:

P370+P378: IN CASE OF FIRE: USE DRY CHEMICAL OR CARBON DIOXIDE TO EXTINGUISH.
P301+P310+P331: IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR. DO NOT INDUCE
VOMITING.
P304+P340: IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.
P302+P352: IF ON SKIN: WASH WITH PLENTY OF WATER.
P305+P351+P338: IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT
LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.

SAFETY DATA SHEET

INFINITY WASH HMK-1 WM

DATE: 1/1/2015

Storage:

P403+P233+P405: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. STORE LOCKED UP.

Disposal:

P501: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/REGIONAL/NATIONAL REGULATIONS.

HMIS Classification

Health Hazard: 2

Flammability: 2

Physical Hazard: 0

Personal Protection: B

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component(s)</u>	<u>CAS Number</u>	<u>*Concentration (weight)</u>
Aliphatic Hydrocarbon	64742-88-7	80-100%

* In accordance with paragraph (i) of §1910.1200, exact chemical percentages (concentration) of composition have been withheld as a trade secret.

4. FIRST AID MEASURES

Exposure Routes: Inhalation, Ingestion, Skin

Eye Contact: Flush with large volume of water for at least 15 minutes. Get immediate medical attention.

Inhalation: Remove to fresh air. Get immediate medical attention.

Ingestion: Get immediate medical attention. Do not induce vomiting.

Skin Contact: Flush area with large amounts of water for at least 15 minutes. Get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical or carbon dioxide.

Specific Hazards: Combustible Liquid. Upon combustion, the product may form carbon monoxide and other organic compounds. Product containers may rupture from vapor pressure when exposed to heat from fire.

Special protective equipment for fire-fighters: Use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions and protective equipment:

Respiratory Protection: Use supplied air equipment or respirators with proper NIOSH approved cartridges.

Protective Gloves: Impervious or chemical resistant gloves (consult safety equipment supplier).

Eye Protection: Chemical splash goggles recommended against potential eye contact.

Other Protective Clothing and Equipment: Safety shoes and aprons recommended.

Methods for Clean-Up:

Minor Spills: Absorb material with ground clay, vermiculite, sand, or similar absorbent material and place into containers for disposal according to local and/or state regulations.

Major Spills: Dike and contain spill. Eliminate potential sources of ignition, and shut off source of spill if possible. Remove liquid by chemical vacuum, absorbent material, or other safe and approved methods, and place into containers for disposal according to local and/or state regulations. Flush area with water to remove residue, and remove flushed solutions as above.

7. HANDLING AND STORAGE

Handling: Combustible Liquid - empty containers can be hazardous and contain explosive vapors. Do not reuse containers. Ground fixed equipment. Bond and ground transfer equipment and containers.

Storage: Store in a cool, dry, ventilated area, away from incompatible substances. Keep containers closed when not in use.

SAFETY DATA SHEET

INFINITY WASH HMK-1 WM

DATE: 1/1/2015

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guidelines:**

<u>COMPONENT</u>	<u>CAS No.</u>	<u>OSHA PEL/TWA</u>	<u>ACGIH TLV/TWA</u>	<u>ACGIH TLV/STEL</u>	<u>OTHER RATING</u>
Aliphatic Hydrocarbon	64742-88-7	100ppm(1)	100ppm		

(1) Based on 1989 VPEL levels for Stoddard Solvent; current PEL is 500ppm.

Exposure Controls: Avoid open electrical sources near product vapor areas.

Personal Protection Equipment:

Eyes: Chemical splash goggles recommended.

Skin and body: Impervious or chemical resistant gloves (consult safety equipment supplier).

Respiratory: Ventilation in work area should be sufficient to maintain atmosphere with vapor level below lowest listed TLV. If TLV's are exceeded, use a respirator with appropriate NIOSH approved cartridges or supplied air equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cloudy to water white liquid.

Odor: Petroleum odor.

pH: N/A

Melting point: N/A

Boiling Point: 355° F

Flash Point: (Tag Closed Cup Method) 147° F

Flammable Limits: Calculated

LEL: 1.0%

UEL: 7.0%

Vapor Pressure: (mmHg) <1.0 @ 68° F (20° C)

Vapor Density: (Air = 1) 5.4

Specific Gravity: (Water = 1) 0.79

Solubility in water: Miscible

Maximum VOC Content: 6.57 Lb/Gal (788 Gm/L)

Maximum VOC %: (EPA Method 24) 99%

Odor Threshold: N/A

Evaporation Rate: N/A

Relative Density: N/A

Partition Coefficient: N-Octano/Water: N/A

Auto-ignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Incompatible Materials: Avoid strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and other compounds during combustion.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid exposure to high heat sources, electrical and welding arcs, open flame and strong oxidizing agents.

Warning: Spontaneous combustion may occur when solvent soaked combustible materials (paper, cotton etc.) are allowed to stand in confined areas.

SAFETY DATA SHEET

INFINITY WASH HMK-1 WM

DATE: 1/1/2015

11. TOXICOLOGICAL INFORMATION

(ATE) FOR MIXTURE:

Specific tests have not been conducted on this product. Our evaluations based on information from the ingredients and technical literature. Data for this material has been used to estimate the symptoms and effects of exposure.

Oral LD50:

LD50 Oral - $\geq 2,512$ mg/kg

Dermal LD50:

LD50 Dermal - $\geq 2,512$ mg/kg

Inhalation LC50:

LC50 Inhalation - No data available

Other information on Acute Toxicity:

No data available

Routes of exposure: Inhalation, Ingestion, Skin

Acute: Overexposure may lead to central nervous system depression, leading to headaches, nausea and unconsciousness.

Chronic: Overexposure in high concentrations may produce central nervous system depression.

Signs and Symptoms of Exposure: Overexposure may lead to dizziness, headaches, dermatitis and eye irritation.

Medical Conditions Aggravated by Exposure: Preexisting eye, skin, liver, kidney, or respiratory disorders may be aggravated by exposure.

Carcinogenicity (NTP, IARC, OSHA): Components of this product have not shown any evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in the soil: No data available

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods:

Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant

Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

14. TRANSPORTATION INFORMATION

<u>U.S. D.O.T. DESIGNATION</u>	<u>ID NUMBER</u>	<u>HAZARD CLASS</u>	<u>PACKING GROUP</u>
Cleaning Liquid. Not Regulated.			

SAFETY DATA SHEET

INFINITY WASH HMK-1 WM

DATE: 1/1/2015

15. REGULATORY INFORMATION

Regulatory Information: This information may be useful in complying with various federal and state regulations: Components present in this product at a level which could require reporting under EPA Regulation 40CFR302 (CERCLA) Section 102 and EPA Regulation 40CFR372 (SARA) 313: None.

Product may contain components which are further regulated by state and/or local agencies - Consult Appropriate Agencies.

Notification status:

U.S.A.: Toxic Substances Control Act (TSCA) Y

Canada: Domestic Substances List (DSL): Y

16. OTHER INFORMATION

For More Information, Consult Tower Products, Inc.

This Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied Is Made.

Date of Preparation: January 1, 2015

SAFETY DATA SHEET

CTP SCRATCH REMOVER

DATE: 1/1/2015

1. CHEMICAL NAME AND COMPANY IDENTIFICATION

Formulated/Manufactured By: Tower Products, Inc.
2703 Freemansburg Avenue
Easton, PA 18045

Information Telephone Number: 1-800-527-8626 or 610-253-6206

For Chemical Spill Emergency Call: CHEMTREC: 1-800-424-9300

Product Name: CTP Scratch Remover (Scratch Remover for CTP Plates)

CAS Number: Mixture - Not Established

2. HAZARD(S) IDENTIFICATION

GHS Classification

Flammable Liquids (Category 4)
Skin Irritation (Category 2)
Eye Irritation (Category 2A)
Specific Target Organ Toxicity - Single Exposure (Category 3)

GHS label elements, including hazard and precautionary statements

Pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

H227: COMBUSTIBLE LIQUID.
H315: CAUSES SKIN IRRITATION.
H319: CAUSES SERIOUS EYE IRRITATION.
H336: MAY CAUSE DROWSINESS OR DIZZINESS.

Precautionary statement(s)

Prevention:

P210: KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES AND OTHER IGNITION SOURCES.
NO SMOKING.
P280: WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
P264: WASH SKIN THOROUGHLY AFTER HANDLING.
P261: AVOID BREATHING DUST/FUME/GAS/MIST/VAPOR/SPRAY.

Response:

P370+P378: IN CASE OF FIRE: USE WATER TO EXTINGUISH.
P302+P352: IF ON SKIN: WASH WITH PLENTY OF WATER.
P305+P351+P338: IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.
P304+P340: IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.

SAFETY DATA SHEET

CTP SCRATCH REMOVER

DATE: 1/1/2015

Storage:

P403+P233+P405: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. STORE LOCKED UP.

Disposal:

P501: DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/REGIONAL/NATIONAL REGULATIONS.

HMIS Classification

Health Hazard: 2

Flammability: 2

Physical Hazard: 0

Personal Protection: B

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component(s)</u>	<u>CAS Number</u>	<u>*Concentration (weight)</u>
Aliphatic Hydrocarbon	64742-47-8	10-25%
Aromatic Hydrocarbon	64742-95-6	1-10%
Glycerin	56-81-5	1-10%
Phosphoric Acid	7664-38-2	1-10%
Nonionic Surfactant	9036-19-5	1-10%
Sodium Hexametaphosphate	10124-56-8	1-10%
Magnesium Nitrate Hexahydrate	13446-18-9	1-10%
Nonylphenol Ethoxylates	9016-45-9	1-10%
Components of the Aromatic Hydrocarbon:		
1,2,4-Trimethylbenzene	95-63-6	≤ 1.65%
Xylene	1330-20-7	< 1.0% - TRACE
Cumene	98-82-8	< 1.0% - TRACE

* In accordance with paragraph (i) of §1910.1200, exact chemical percentages (concentration) of composition have been withheld as a trade secret.

4. FIRST AID MEASURES

Exposure Routes: Inhalation, Ingestion, Skin

Eye Contact: Flush with large volume of water for at least 15 minutes. Get immediate medical attention.

Inhalation: Remove to fresh air. Get immediate medical attention.

Ingestion: Get immediate medical attention. Do not induce vomiting.

Skin Contact: Flush area with large amounts of water for at least 15 minutes. Get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water.

Specific Hazards: None.

Special protective equipment for fire-fighters: Use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions and protective equipment:

Respiratory Protection: Use supplied air equipment or respirators with proper NIOSH approved cartridges.

Protective Gloves: Impervious or chemical resistant gloves (consult safety equipment supplier).

Eye Protection: Chemical splash goggles recommended against potential eye contact.

Other Protective Clothing and Equipment: Safety shoes and aprons recommended.

Methods for Clean-Up:

Minor Spills: Absorb material with ground clay, vermiculite, sand, or similar absorbent material and place into containers for disposal according to local and/or state regulations.

Major Spills: Dike and contain spill. Eliminate potential sources of ignition, and shut off source of spill if possible. Remove liquid by chemical vacuum, absorbent material, or other safe and approved methods, and place into containers for disposal according to local and/or state regulations. Flush area with water to remove residue, and remove flushed solutions as above.

SAFETY DATA SHEET

CTP SCRATCH REMOVER

DATE: 1/1/2015

7. HANDLING AND STORAGE

Handling: Do not reuse containers. Empty containers can be hazardous. Ground fixed equipment. Bond and ground transfer equipment and containers. Plastic or stainless steel pumps or faucets recommended.

Storage: Store in a cool, dry, ventilated area, away from incompatible substances. Keep containers closed when not in use.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Guidelines:**

<u>COMPONENT</u>	<u>CAS No.</u>	<u>OSHA PEL/TWA</u>	<u>ACGIH TLV/TWA</u>	<u>ACGIH TLV/STEL</u>	<u>OTHER RATING</u>
Aliphatic Hydrocarbon	64742-47-8	100ppm(1)	100ppm		
Aromatic Hydrocarbon	64742-95-6	100ppm(2)	100ppm		
Glycerin	56-81-5	15mg/m3	10mg/m3		
Phosphoric Acid	7664-38-2	1mg/m3	1mg/m3	3mg/m3	
Nonionic Surfactant	9036-19-5	N/E	N/E		
Sodium Hexametaphosphate	10124-56-8	N/E	N/E		
Magnesium Nitrate Hexahydrate	13446-18-9	N/E	N/E		
Nonylphenol Ethoxylates	9016-45-9	N/E	N/E		

(1) Based on 1989 VPEL levels for Stoddard Solvent; current PEL is 500ppm.

(2) Based on PEL for Xylene.

This blend contains approximately 1.65% 1,2,4 Trimethylbenzene. Xylene, Cumene and Ethyl Benzene are present at less than 1%.

Exposure Controls: Avoid open electrical sources near product vapor areas.

Personal Protection Equipment:

Eyes: Chemical splash goggles recommended.

Skin and body: Impervious or chemical resistant gloves (consult safety equipment supplier).

Respiratory: Ventilation in work area should be sufficient to maintain atmosphere with vapor level below lowest listed TLV.

If TLV's are exceeded, use a respirator with appropriate NIOSH approved cartridges or supplied air equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White emulsion

Odor: Mild solvent odor

pH: 2.2 - 2.4

Melting point: N/A

Boiling Point: 212° F

Flash Point: (Tag Closed Cup Method) > 150° F

Flammable Limits:

LEL: N/A

UEL: N/A

Vapor Pressure: (mmHg, calculated) < 1

Vapor Density: (air = 1, calculated) 17.4

Specific Gravity: (Water = 1) 1.12

Solubility in water: Emulsion

Maximum VOC Content: 1.3 Lb/G (156 Gm/L)

Maximum VOC %: 14%

Odor Threshold: N/A

Evaporation Rate: N/A

Relative Density: N/A

Partition Coefficient: N-Octano/Water: N/A

Auto-ignition Temperature: N/A

Decomposition Temperature: N/A

Viscosity: N/A

SAFETY DATA SHEET

CTP SCRATCH REMOVER

DATE: 1/1/2015

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Incompatible Materials: Avoid contact with acids, flammable liquids, organic halogens, aluminum and soft alloys.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid exposure to high heat sources, electrical and welding arcs, open flame, contact with acids, flammable liquids, organic halogens, aluminum and soft alloys.

11. TOXICOLOGICAL INFORMATION

(ATE) FOR MIXTURE:

Specific tests have not been conducted on this product. Our evaluations based on information from the ingredients and technical literature. Data for this material has been used to estimate the symptoms and effects of exposure.

Oral LD50:

LD50 Oral - $\geq 6,211$ mg/kg

Dermal LD50:

LD50 Dermal - $\geq 12,820$ mg/kg

Inhalation LC50:

LC50 Inhalation - No data available.

Other information on Acute Toxicity:

No data available

Routes of exposure: Inhalation, Ingestion, Skin

Acute: Overexposure may lead to dermatitis and eye irritation.

Chronic: Overexposure in high concentrations may dermatitis and eye irritation.

Signs and Symptoms of Exposure: Overexposure may lead to dermatitis and eye irritation.

Medical Conditions Aggravated by Exposure: Preexisting eye, skin, liver, kidney, blood, nerve, or respiratory disorders may be aggravated by exposure.

Carcinogenicity (NTP, IARC, OSHA): Components of this product have not shown any evidence of carcinogenicity.

TRACE amounts (<1%) of Ethyl Benzene and Cumene, as components of the Aromatic Hydrocarbon, are listed by IARC as 2B Possible Human Carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in the soil: No data available

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods:

Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

SAFETY DATA SHEET

CTP SCRATCH REMOVER

DATE: 1/1/2015

14. TRANSPORTATION INFORMATION

<u>U.S. D.O.T. DESIGNATION</u>	<u>ID NUMBER</u>	<u>HAZARD CLASS</u>	<u>PACKING GROUP</u>
Cleaning Liquid. Not Regulated			

U.N. DESIGNATION

Same as D.O.T.

15. REGULATORY INFORMATION

Regulatory Information: This information may be useful in complying with various federal and state regulations: Components present in this product at a level which could require reporting under EPA Regulation 40CFR302 (CERCLA) Section 102 and EPA Regulation 40CFR372 (SARA) 313: This product contains approximately 1.65% 1,2,4-Trimethylbenzene, and 2.9% Phosphoric Acid 85%. Cumene, Ethyl Benzene and Xylenes are present at less than 1.0%.

Product may contain components which are further regulated by state and/or local agencies - Consult Appropriate Agencies.

Notification status:

U.S.: Toxic Substances Control Act (TSCA)	Y
Canada: Domestic Substances List (DSL):	Y

16. OTHER INFORMATION

For More Information, Consult Tower Products, Inc.

This Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied Is Made.

Date of Preparation: January 1, 2015

Printing Inks

HOJA MATERIAL de SEGURIDAD DATOS

SUPERIOR PRINTING INK COMPANY, INC.
100 NORTH STREET
TETERBORO, NJ 07608

TELEFONO de INFORMACION: (201) 478-5600
TELEFONO DE EMERGENCIA: (201) 478-5600
FECHA de PREPARACION: Noviembre 14, 2008
HMIS: H1 F1 R0

SECCION I

CLASE DE PRODUCTO: Tintas Offset Oxidantes
COMERCIE NOMBRE: Biolocity MT Process Colors
NUMERO de ARTICULO: YC-4197; DRE-1900; MBE-9117; AE-2118

SECCION II — COMPONENTES PELIGROSOS

Este producto no es considerado peligroso bajo el Estándar de Comunicación de Peligro de OSHA, 29CFR 1910.1200.

SECCION III — DATOS FISICOS

	NUMEROS de TINTAS			
	YC-4197	DRE-1900	MBE-9117	AE-2118
GAMA HIRVIENTE (°F): 520 - 578				
LA DENSIDAD DE VAPOR VS. AIRE: Más pesado				
LA DENSIDAD LIQUIDA VS. AGUA: Más pesado				
LA TASA DE LA EVAPORACION VS. ACETATO DE BUTILO: Más despacio				
SOLUBILIDAD EN EL AGUA: Ninguno				
APARIENCIA: Coloró Pasta				
EI TIPO DE OLOR: Grasiento				
GRAVEDAD ESPECIFICA	0.96	1.03	1.03	1.08
PESO (lb/gal)	8.01	8.39	8.39	9.01
VOLATILES (Mpgl)	0.24	0.25	0.25	0.27
PORCENTAJE DE VOLATILES POR PESO	<3.0	<3.0	<3.0	<3.0

SECCION IV — DESPIDA Y los DATOS de EXPLOSION

CLASIFICACION DE INFLAMABILIDAD **PUNTO ALGIDO (°F)** >200 **LIMITE MAS BAJO de EXPLOSION:**
NFPA: CLASE III B **DOT:** No Regulado **(Metodo usado):** SETA C.C. Ningunos Datos
MEDIOS EXTINCION: Rociador, espuma, CO₂ o sustancia química seca.

PELIGROS INSUALES DE INCENDIO Y EXPLOSIVIDAD: Puede despedir humo denso al quemar.

PROCEDIMIENTOS ESPECIALES EN CASO DE INCENDIO: Los bomberos deben ser equipados con respirador y ropa adecuada. El rocío del agua puede ser utilizado para refrescar contenedores cerrados para prevenir aumento de presión y auto-ignición cuando expuesto al calor extremo. Cuando agua es utilizada, bocas de rociador son preferible.

SECCION V — DATOS de PELIGRO PARA LA SALUD

EFFECTOS DE EXPOSICION EXCESIVA: A causa de la propiedad en ciertos ingredientes para descomponer las grasas, el contacto de la piel puede tener como resultado la sequedad y/o la irritación y la dermatitis puede desarrollarse con exposición prolongada. Irritación del los ojos es también posible.

CONDICIONES MEDICAS QUE PODRIAN AGRAVARSE POR EXPOSICION: Es contacto puede agravar una dermatitis ya existente.

RUTA PRIMARIA DE ENTRADA: A traves de la piel.

PROCEDIMIENTOS DE EMERGENCIA Y PRIMEROS AUXILIOS:

Inalacion: Retírese de la exposición y restaure la respiración. Llámese a un médico.
Ojos: Limpie con agua durante 15 minutos y llámese a un médico.
Piel: Lave con jabón y agua. Quite la ropa contaminada.
Ingestión: NO INDUZCA VOMITAR.

SECTION VI — DATOS de REACTIVIDAD

ESTABILIDAD DEL PRODUCTO: Estable

CONDICIONES PARA EVITAR: El calor, las chispas y llamas abiertas.

PRODUCTOS PELIGROSOS de DESCOMPOSICION: CO, CO₂ y NO_x en el ardor.

POLIMERIZACION PELIGROSA: No ocurrirá.

SECCION VII — ROCIE O SALGA SE PROCEDIMIENTOS

PROCEDIMIENTO A SEGUIR EN CASO DE DERRAMES: Limpie. Disponga de paños o toallas en contenedores aprobados para desechos grasientos.

METODO de ELIMINACION DE DESECHOS: En acuerdo con regulaciones Federal, Estatales y/o Locales.

SECCION VIII — INFORMACION ESPECIAL de PROTECCION

VENTILACION: Bajo condiciones normales, ventilación general o ventilación local de escape o como especificado por requisitos Locales y/o Estatales.

GUANTES PROTECTORES: Necesario para el contacto prolongado o repetido.

PROTECCION RESPIRATORIA: Ninguno requerido normalmente.

PROTECCION de LOS OJOS: Ninguno requerido en el uso normal.

OTRO EQUIPO DE PROTECCION: Ninguno

SECCION IX — PRECAUCIONES ESPECIALES

MANEJO Y ALMACENAMIENTO: Almacene en contenedores sellados lejos de calor, las chispas, llamas, y materias oxidants. Tenga un extinguidor de fuego fácilmente disponible y el personal entrenado en su uso apropiado.

OTRAS PRECAUCIONES: SOLO PARA USO INDUSTRIAL. NO TOME INTERNAMENTE. NO VUELVA A EMPLEAR CONTENEDOR PARA OTROS FINES.

SECCION X — OTROS CONTROLES REGULATIVOS

LA SECCION 313 SUMINISTRADOR NOTIFICACION: Este producto contiene el siguientes sustancias químicas tóxicas que son susceptibles a los requisitos de la cobertura de Sección 313 la Emergencia que Planea y el Derecho de la Comunidad a Derecho de Saber de 1986 y 40 CFR 372:

Sustancia de Reportable

Porcentaje por Peso

Compuesto de manganeso

1.2

Mientras que Superior Printing Ink Co., Inc. cree que el conjunto de datos este documento es exacto a la fecha del mismo. Superior Printing Ink Co., Inc. no garantiza con respecto al mismo, y expresamente renuncia a toda obligación para la dependencia sobre reclamacion. Tales datos son ofrecidos únicamente para su consideración, investigación y comprobación.

Biolocity

Biolocity is an innovation in environmentally responsible sheetfed ink technology that delivers superb lithographic performance, press productivity, and print quality with extremely low levels of volatile organic compounds. **Biolocity** sets a new industry benchmark for green formulation technology with the incorporation of high percentages of bio-derived, renewable raw materials.

Performance benefits of Biolocity:

- Outstanding lithographic performance on a wide variety of porous substrates
- Extremely fast setting and drying performance provides substantial reduction in time to bindery, a critical factor in today's short run and time-sensitive market
- Highly press-stable formulation reduces make-ready time and color drift during runs, resulting in less printed waste
- Stays open on the rollers overnight and for one week in the ink fountain
- Delivers a rub resistant, durable printed product on a broad range of papers and boards
- Suitable for aqueous coating, UV coating (off-line), and lamination
- Conforms to ISO 2846-1 color standards, allowing the printer to run to ISO 12647-2 and G7 specifications in the pressroom

Environmental benefits of Biolocity:

- Essentially 100% solids formulation with extremely low VOC content (less than 3% by EPA Method 24)
- Formulated with 23% or more vegetable oil
- Does not contain any petroleum-derived ink solvents
- Product contains a minimum of 60% bio-derived, renewable, and sustainable raw materials
- Environmentally responsible technology for printers looking to operate a greener pressroom

Biolocity LT

Color	Process
YC-4239	Process Yellow
DRE-1931	Process Magenta
MBE-9147	Process Cyan
AE-2143	Process Black
AE-2164	Dense Black

Attack	Viscosity	VOC
10.5 - 12.5	200 - 280	less than 3%
GLASS COATED	MATTE/DULL COATED	UNCOATED OFFSET
BOARDS	PRINT SHAP/PREST	WORK & TURN
STAY OPEN	TEB RESISTANCE	RUB RESIST

Biolocity MT

Color	Process
YC-4197	Process Yellow
DRE-1900	Process Magenta
MBE-9117	Process Cyan
AE-2118	Process Black
AE-2163	Dense Black

Attack	Viscosity	VOC
14 - 16	250 - 350	less than 3%
GLASS COATED	MATTE/DULL COATED	UNCOATED OFFSET
BOARDS	PRINT SHAP/PREST	WORK & TURN
STAY OPEN	TEB RESISTANCE	RUB RESIST

Suitable	Recommended	Highly Recommended
Ink Duct	Rollers	

Using an Electronic Inkometer #220 rpm
For setting taken on a Deter Viscometer

Superior

PRINTING INKS



100 North Street ♦ Teterboro, New Jersey 07608
Telephone: 877.525.1918 ♦ Facsimile: 201.478.5650
www.superiorink.com ♦ email: info@superiorink.com

Modern Technology/Old Fashioned Service™
Since 1918

MATERIAL SAFETY DATA SHEET

SUPERIOR PRINTING INK COMPANY, INC.
70 BETHUNE STREET
NEW YORK, NY 10014

INFORMATION PHONE: (212) 741-3600
EMERGENCY PHONE: (212) 741-3600
DATE PREPARED: July 25, 2002
HMIS: H1 F1 R0

SECTION I

PRODUCT CLASS: Oxidizing Offset Inks
TRADE NAME: Offset Precision Pantone® Colors
PRODUCT NUMBER: All Codes (See Page 2)

SECTION II — HAZARDOUS COMPONENTS

This product is not considered hazardous under the CSHA Hazard Communication Standard, 29CFR 1910.1200.

SECTION III — PHYSICAL DATA

BOILING RANGE (°F): 520 - 578
VAPOR DENSITY VS. AIR: Heavier
LIQUID DENSITY VS. WATER: Heavier
EVAPORATION RATE VS. BUTYL ACETATE: Slower
SOLUBILITY IN WATER: None
APPEARANCE: Colored Paste
TYPE OF ODOR: Oily
% VOLATILES, Wt.: 9-18 — EPA Method 24

SECTION IV — FIRE AND EXPLOSION DATA

FLAMMABILITY CLASSIFICATION

OSHA: CLASS III B

DOT: Not Regulated

FLASH PT. (°F) >200
(Method used): SETA C.C

LEL: No Data

EXTINGUISHING MEDIA: Use fog, foam, CO₂ or dry chemical

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke may be generated when burning.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should be equipped with self-contained breathing apparatus and turnout gear. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition when exposed to extreme heat. When water is used, fog nozzles are preferable.

SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Because of the defatting property in certain ingredients, skin contact may result in dryness and/or irritation and dermatitis may develop with prolonged exposure. Eye irritation is also possible.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: It is expected that skin contact may aggravate an existing dermatitis.

PRIMARY ROUTE(S) OF ENTRY: DERMAL

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure, restore breathing. Call physician.

Eyes: Flush with water for 15 minutes. Call physician.

Skin: Wash with soap and water, remove contaminated clothing.

Ingestion: DO NOT INDUCE VOMITING

ATT: BATZARDA

SUPERIOR Printing Ink Company, Inc.
May 28, 1996

SECTION VI — REACTIVITY DATA

PRODUCT STABILITY: STABLE

CONDITIONS TO AVOID: Heat, sparks, and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, and N₂O on burning.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII — SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up - Dispose of wipers in containers approved for oily wastes.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and Local regulations.

SECTION VIII — SPECIAL PROTECTION INFORMATION

VENTILATION: Under normal conditions, general ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: Required for prolonged or repeated contact.

RESPIRATORY PROTECTION: None required normally.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None

SECTION IX — SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in sealed containers away from heat, sparks, open flames, and oxidizing materials. Fire extinguisher readily available and personnel trained in its proper use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

While Superior Printing Ink Company, Inc. believes the data set forth herein are accurate as of the date hereof, Superior Printing Ink Company, Inc. makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

MATERIAL SAFETY DATA SHEET

SUPERIOR PRINTING INK COMPANY, INC.
70 BETHUNE STREET
NEW YORK, NY 10014

INFORMATION PHONE: (212) 741-3600
EMERGENCY PHONE: (212) 741-3600
DATE PREPARED: May 28, 1996
HMIS: H1 F1 R0

SECTION I

PRODUCT CLASS: Oxidizing Offset Inks
TRADE NAME: Offset Rotary (No Heat Web Offset)
PRODUCT NUMBER: All Codes

SECTION II — HAZARDOUS COMPONENTS

This product is not considered hazardous under the OSHA Hazard Communication Standard, 29CFR 1910.1200.

SECTION III — PHYSICAL DATA

BOILING RANGE (°F): 520 - 578
VAPOR DENSITY VS. AIR: Heavier
LIQUID DENSITY VS. WATER: Heavier
EVAPORATION RATE VS. BUTYL ACETATE: Slower
SOLUBILITY IN WATER: None
APPEARANCE: Colored Paste
TYPE OF ODOR: Oily
% VOLATILES, Wt: 35 Max. — EPA Method 24

SECTION IV. — FIRE AND EXPLOSION DATA

FLAMMABILITY CLASSIFICATION

OSHA: CLASS III B DOT: Not Regulated FLASH PT. (°F) >200 LEL: No Data
(Method used): SETA C.C.

EXTINGUISHING MEDIA: Use fog, foam, CO₂ or dry chemical

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke may be generated when burning.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should be equipped with self-contained breathing apparatus and turnout gear. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition when exposed to extreme heat. When water is used, fog nozzles are preferable.

SECTION V — HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Because of the defatting property in certain ingredients, skin contact may result in dryness and/or irritation and dermatitis may develop with prolonged exposure. Eye irritation is also possible.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: It is expected that skin contact may aggravate an existing dermatitis

PRIMARY ROUTE(S) OF ENTRY: DERMAL

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure, restore breathing. Call physician.
Eyes: Flush with water for 15 minutes. Call physician.
Skin: Wash with soap and water, remove contaminated clothing.
Ingestion: DO NOT INDUCE VOMITING

SUPERIOR Printing Ink Company, Inc.
July 25, 2002

SECTION VI — REACTIVITY DATA

PRODUCT STABILITY: STABLE

CONDITIONS TO AVOID: Heat, sparks and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, and N₂O on burning.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VII — SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up - Dispose of wipers in containers approved for oily wastes.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and Local regulations.

SECTION VIII — SPECIAL PROTECTION INFORMATION

VENTILATION: Under normal conditions, general ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: Required for prolonged or repeated contact.

RESPIRATORY PROTECTION: None required normally.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None

SECTION IX — SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in sealed containers away from heat, sparks, open flames, and oxidizing materials. Fire extinguisher readily available and personnel trained in its proper use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

SECTION 313 SUPPLIER NOTIFICATION

*This product contains the following toxic chemicals that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372:

COLOR	PRODUCT No.	METHOD 24 VOC, WT. %	SARA 313 REPORTING
YELLOW	YB-9310	18	NONE
*WARM RED	MRC-1870	14	BARIUM COMPOUND, 31%
RUBINE RED	DRD-3450	16	NONE
RHODAMINE RED	DRD-3460	18	NONE
PURPLE	PA-9030	18	NONE
VIOLET	PA-9040	17	NONE
REFLEX BLUE	DBD-5550	12	NONE
PROCESS BLUE	MBE-4720	14	NONE
GREEN	MGB-8230	17	NONE
TRANSPARENT WHITE	W-4030	16	NONE
NEUTRAL BLACK	AD-5050	9	NONE

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Material Safety Data Sheet

MSDS: 11023 - OFFSET SOY ROTARY / BUSINESS FORMS

Plant #: 401 Insertion =====

Status: Pending

Revised: 12/02

Formula: NOT GIVEN

Part Number: NOT GIVEN

Specification: NOT GIVEN

Keyword: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

SUPERIOR PRINTING INK CO., INC.

70 BETHUNE STREET

NEW YORK, NY 10014

Phone: 212-741-3600

Emergency: 212-741-3600

Supplier

SUPERIOR PRINTING INK CO., INC.

70 BETHUNE STREET

NEW YORK, NY 10014

Phone: 212-741-3600

Emergency: 212-741-3600

Physical/Chemical Characteristics

Boiling Point	BT	520 F	578 F
Melting Point	NC		
Freezing Point	NC		
Pour Point	NC		
Softening Point	NC		
Specific Gravity	LT	1	LIQ.DENSITY,LIGHTER.
Vapor Pressure	NC		
Vapor Density	GT	1	HEAVIER THAN AIR.
Percent Volatiles	LE	13%	BY WT.
Evaporation Rate	LT	1	SLOWER, EVAP=1.
PH	NC		
Molecular Weight	NC		
Viscosity	NC		
Solubility in Water ...	NONE.		

Odor/Appearance/Other Characteristics: OILY ODOR / COLORED PASTE.

Fire and Explosion Data

Closed Cup Flash Pt. .:	EQ	250 F	SETA.
Open Cup Flash Point .:	NC		
Fire Point	NC		
Auto Ignition	NC		
Lower Explosion Limit :	NO		NO DATA.
Upper Explosion Limit :	NC		

Shipping Regulations

UN/NA Number: NG
DOT Hazard Class: NOT REGULATED
Shipping Label: NOT GIVEN
Shipping Name: NOT GIVEN

Material Safety Data Sheet

MSDS: 11823

MSDS: 11823 - OFFSET SOY ROTARY / BUSINESS FORMS

Plant #: 404 Insetco ===== Page 2

Prepared

Preparer's Name & Title: NOT GIVEN

Preparation Date: 10/01/90

Component(s):

OXIDIZING OFFSET INKS

OSHA PEL: NG ppm NG mg/m3

ACGIH TLV: NG ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: NG

CAS NO.: NOT GIVEN

Text Section(s)

PRODUCT IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

TRADE NAME: Oxidizing Offset Inks

PRODUCT CLASS: Offset Soy Rotary / Business Forms

PRODUCT NUMBER: All Codes

HMIS: HEALTH = 1; FLAMMABILITY = 1; REACTIVITY = 0

MANUFACTURER:

SUPERIOR PRINTING INK CO., INC.

70 BETHUNE STREET

NEW YORK, NY 10014

INFORMATION PHONE: (212) 741-3600

EMERGENCY PHONE: (212) 741-3600

HAZARDOUS COMPONENTS

SEE COMPONENT PAGES FOR ADDITIONAL INFORMATION.

This product is not considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

PHYSICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

Material Safety Data Sheet

MSDS: 11823 - OFFSET SOY P.L.T. - BUSINESS FORM

Plant #: 404 Inc. 1000 8000 000 000 000 000 000 000

MSDS: 11823

FIRE AND EXPLOSION DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FLAMMABILITY CLASSIFICATION:

OSHA: Class IIIIB

EXTINGUISHING MEDIA: Use water fog, foam, CO2, or dry chemical.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke may be generated when burning.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition when exposed to extreme heat. When water is used, fog nozzles are preferable.

HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Because of the defatting property in certain ingredients, skin contact may result in dryness and/or irritation and dermatitis may develop with prolonged exposure.

Eye irritation is also possible.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: It is expected that skin contact may aggravate an existing dermatitis.

PRIMARY ROUTE(S) OF ENTRY: DERMAL

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove from exposure, restore breathing. Call physician.

EYES: Flush with water for 15 minutes. Call physician.

SKIN: Wash with soap and water, remove contaminated clothing.

INGESTION: DO NOT INDUCE VOMITING.

REACTIVITY DATA

PRODUCT STABILITY: STABLE

CONDITIONS TO AVOID: Heat, sparks, and open flame.

HAZARDOUS DECOMPOSITION PRODUCTS: CO and CO2 on burning.

HAZARDOUS POLYMERIZATION: Will not occur

SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up - Dispose of wipers in containers approved for oily wastes.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and local regulations.

SPECIAL PROTECTION INFORMATION

VENTILATION: General ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: Required for prolonged or repeated contact.

RESPIRATORY PROTECTION: None required in normal usage.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None

SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in sealed containers away from heat, sparks, open flames and oxidizing materials. Fire extinguisher readily available and personnel trained in its proper use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

SPECIAL NOTES

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End of MSDS

Material Safety Data Sheet

MSDS: 11962

MSDS: 11962 - CML OIL BASE PLUS COLORS

Plant #: 404 Insertco ===== 4/24/96

Status: Pending

Revised: 2/08/96

Formula: NOT GIVEN

Part Number: NOT GIVEN

Specification: NOT GIVEN

Keyword: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

VAN SON ROYAL DUTCH PRINTING INK FACTORIES

HILVERSUM, HOLLAND

Phone:

Emergency:

Supplier

VAN SON HOLLAND INK CORP. OF AMERICA

92 UNION ST.

MINEOLA, NY 11501

Phone:

Emergency: 516 294-8811

Physical/Chemical Characteristics

Boiling Point: GT 500 F

Melting Point: NG

Freezing Point: NA

Pour Point: NG

Softening Point: NG

Specific Gravity: BT 1.05 1.10

Vapor Pressure: LT 2.068

Vapor Density: GT 1

Percent Volatiles: BT 10% 15%

Evaporation Rate: LT 1

pH: NA

Molecular Weight: NG

Viscosity: NG

Solubility in Water ..: NOT GIVEN

Odor/Appearance/Other Characteristics:

COLORED VISCOUS PASTE / OILY ODOR / V.P.: ASTM D1475 / ODOR THRESHOLD: HIGH.

DENS.: 8.7-9.5 #/GAL
MM HG, <0.04 PSI.
HEAVIER VS. AIR.
ASTM D-2369, BY WT.
BU AC=1, SLOWER.

Fire and Explosion Data

Closed Cup Flash Pt. .: GT 250 F

Open Cup Flash Point .: NG

Fire Point: NG

Auto Ignition: NG

Lower Explosion Limit : NA

Upper Explosion Limit : NA

Shipping Regulations

UN/NA Number: NG

DOT Hazard Class: NOT REGULATED

Shipping Label: NOT GIVEN

Shipping Name: NOT GIVEN

Material Safety Data Sheet
MSDS: 11962 - CML OIL BASE PLUS COLORS
Plant #: 404 Insertco =====

MSDS: 11962

Page 2

Prepared

Preparer's Name & Title: G. LINDQUIST, CONSULTANT
Preparation Date: 1/01/94

Component(s):

BARIUM COMPOUND

OSHA Pel: NG ppm NG mg/m3
ACGIH TLV: NG ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: NG

CAS No.: NOT GIVEN

PIGMENT RED 53.1

OSHA Pel: NG ppm NG mg/m3
ACGIH TLV: NG ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: NG

CAS No.: NOT GIVEN

ORGANIC PIGMENTS

OSHA Pel: NG ppm 3.5 mg/m3
ACGIH TLV: NG ppm 3.5 mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: BT 2% 10%
Note: CAS NO.: VARIOUS.

CAS No.: NOT GIVEN

SYNTHETIC RESINS

OSHA Pel: NA ppm NG mg/m3
ACGIH TLV: NA ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: BT 30% 50%
Note: CAS NO.: VARIOUS.

CAS No.: NOT GIVEN

VEGETABLE OIL

OSHA Pel: NA ppm NG mg/m3
ACGIH TLV: NA ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: BT 18% 28%
Note: CAS NO.: 0001-VARIOUS / INCLUDES: LINSEED OIL & SOYA OIL.

CAS No.: NOT GIVEN

LINSEED OIL

OSHA Pel: NG ppm NG mg/m3
ACGIH TLV: NG ppm NG mg/m3
STEL: NG ppm NG mg/m3
Percent of Product: NG
Note: VEGETABLE OIL.

CAS No.: 8001261

Material Safety Data Sheet

MSDS: 11962

MSDS: 11962 - CML OIL BASE PLUS COLORS

Plant #: 404 Insertco ===== Page 3

SOYA OIL

OSHA Pel: NG ppm NG mg/m3

ACGIH TLV: NG ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: NG

CAS No.: 8001227

Note: VEGETABLE OIL.

SEVERE ACID TREATED OR SOLVENT REFINED MIDDLE DISTILLATE

OSHA Pel: NG ppm 5 mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: NG

CAS No.: 64742138

SEVERE ACID TREATED OR SOLVENT REFINED MIDDLE DISTILLATE

OSHA Pel: NG ppm 5 mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 10% 20%

CAS No.: 64741919

NAPHTHENIC SEVERE HYDROTREATED MIDDLE DISTILLATE

OSHA Pel: NG ppm 5 mg/m3

ACGIH TLV: NG ppm NA mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 5% 10%

CAS No.: 64742536

POLYMERIC WAX BLEND

OSHA Pel: NA ppm NG mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 3% 5%

CAS No.: NOT GIVEN

Note: CAS NO.: NA.

COBALT DRIER

OSHA Pel: NG ppm 0.1 mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 0.0% 1%

CAS No.: 61789524

MANGANESE DRIER

OSHA Pel: NG ppm 5 mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 0.0% 1%

CAS No.: 8030704

Material Safety Data Sheet

MSDS: 11962

MSDS: 11962 - CML OIL BASE PLUS COLORS

Plant #: 404 Insertco ===== Page 4

Text Section(s)

PRODUCT INFORMATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

PRODUCT: CML Oil Base Plus Colors

TRADE NAME: CML Oil Base Plus Colors

PRODUCT CLASS: Offset Ink Oxidizing

MANUFACTURER'S CODE ID: VS700-744 VS746-794

HAZARD RATINGS:

MINIMAL: 0	HEALTH: 1
SLIGHT: 1	
MODERATE: 2	FLAMMABILITY: 1
SERIOUS: 3	
SEVERE: 4	REACTIVITY: 0

MANUFACTURER:

VAN SON ROYAL DUTCH PRINTING INK FACTORIES
HILVERSUM, HOLLAND

DISTRIBUTOR:

VAN SON HOLLAND INK CORP. OF AMERICA
92 UNION STREET
MINEOLA, NY 11501

EMERGENCY TELEPHONE NUMBER: (516) 294-8811

CHEMTREC 24 HOUR EMERGENCY: (800) 424-9300

HAZARDOUS INGREDIENTS

SEE COMPONENT PAGE(S) FOR ADDITIONAL INFORMATION.

OSHA HAZARD COMMUNICATION 29 CFR 1910.1000: Manganese Compound

Material Safety Data Sheet

MSDS: 11962

MSDS: 11962 - CML OIL BASE PLUS COLORS

Plant #: 404 Insetco ===== Page 5

SARA TITLE III SECTION 313: 1% Cobalt Compound and 1% Manganese Compound.
Barium compounds present. Request Table I.

CANADIAN WHMIS: None. Non-controlled product.

CALIFORNIA PROPOSITION 65: Pigment Red 53.1. Request Table I

TSCA INVENTORY: All ingredients listed.

CONEG LEGISLATION: Meets all current State Heavy Metal Limitations.

PRINCIPAL INGREDIENTS:

INGREDIENT	CARCINOGEN
ORGANIC PIGMENTS	NO
SYNTHETIC RESINS	NO
VEGETABLE OIL	NO
SEVERE ACID TREATED OR SOLVENT REFINED MIDDLE DISTILLATE	NO
NAPHTHENIC SEVERE HYDROTREATED MIDDLE DISTILLATE	NO
POLYMERIC WAX BLEND	NO
COBALT DRIER	NO
MANGANESE DRIER	NO

PHYSICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

COEFFICIENT OF WATER/OIL DISTRIBUTION: N/A

VOLATILE ORGANIC COMPOUNDS: 1.00 - 1.20 LBS/GAL, 120-145 GRAMS/LITER, METHOD 24

FIRE AND EXPLOSION DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FLAMMABILITY CLASSIFICATION:

OSHA: III B COMBUSTIBLE LIQUID
DOT: NOT REGULATED HM 181

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: N/A

Material Safety Data Sheet

MSDS: 11962

MSDS: 11962 - CML OIL BASE PLUS COLORS

Plant #: 404 Inertco ===== Page 6

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: N/A

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SPECIAL FIRE FIGHTING PROCEDURES: Self Contained Breathing Apparatus
recommended

HEALTH HAZARD AND TOXICOLOGY DATA

EFFECTS OF OVEREXPOSURE:

EYE CONTACT: Direct contact may cause irritation

SKIN CONTACT: Prolonged contact may cause minor skin irritation

INHALATION: May cause respiratory irritation

INGESTION: May cause gastrointestinal irritation

MEDICAL CONDITIONS AGGRAVATED BY NORMAL EXPOSURE: Persons with Dermatitis
should avoid skin contact

TARGET ORGANS: Skin, eyes, lungs

CARCINOGEN: NO

MUTAGEN: NO

TERATOGEN: NO

REPRODUCTIVE TOXICITY: NO

PRIMARY ROUTE(S) OF ENTRY: Eyes, inhalation, dermal

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT: Flush with water

SKIN CONTACT: Wash with a soap and water

INGESTION: Do not induce vomiting, Call a physician

INHALATION: Remove individual to fresh air.

REACTIVITY DATA

PRODUCT STABILITY: STABLE

CONDITIONS TO AVOID: STRONG OXIDIZING AGENTS

SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up. Dispose of wipes in approved waste containers. If Petroleum Hydrocarbon is used, provide sufficient ventilation.

WASTE DISPOSAL METHOD: Dispose of in accordance with Federal, State, and Local regulations.

SPECIAL PROTECTION INFORMATION

VENTILATION: Use sufficient ventilation

PROTECTIVE GLOVES: Gloves Recommended

RESPIRATORY PROTECTION: None required

EYE PROTECTION: Goggles recommended

OTHER PROTECTIVE EQUIPMENT: None required

SPECIAL PRECAUTIONS

HANDLING AND STORING: Avoid storage above 90 deg F. Keep containers closed when not in use.

OTHER PRECAUTIONS: None required

SPECIAL NOTES

This information is furnished without warranty, express or implied, except that it is accurate to the best of the knowledge of Van Son Holland Ink Corporation of America. The data on this sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The Hazards covered are believed to be those most likely to occur in the reasonable or ordinary use of these materials. Van Son Holland Ink Corporation of America assumes no legal responsibility for use or reliance on this data.

End of MSDS

MATERIAL SAFETY DATA SHEET

Sun Chemical Corporation
631 CENTRAL AVENUE
CARLSTADT, NJ 07072

MSDS Distribution: (201) 933-4500
Regulatory Information: (201) 933-4500
Emergency Call Chemtrec: (800) 424-9300 US
Outside US (703) 527-3887
Medical Emergency: (703) 527-3887

1. PRODUCT IDENTIFICATION

Product Name	PRP50005-R
Product Description	ROTARY PMS 661-U BLUE
Product Category	Business Forms Ink
MSDS Identification No.	000000000000
MSDS Date	01/18/07

2. COMPOSITION (Hazardous Components)

This product does not contain any hazardous ingredients required to be listed under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

3. PRODUCT HAZARDS IDENTIFICATION

Potential Health Effects

Dermal contact is expected to be the primary route of occupational exposure. The following statements are based upon an assessment of the health effects associated with the components present in this product mixture.

Eye

This product may cause mild transient eye irritation. Direct contact may cause redness, tearing and stinging.

Skin

Brief contact with this product should not result in skin irritation. Prolonged or repeated exposure may remove the skin's natural oils resulting in redness, itching and drying of the skin.

Inhalation

This product is not expected to cause respiratory tract irritation under conditions of intended use.

Ingestion

Ingestion of amounts incidental to normal industrial handling are unlikely to cause adverse health effects. Deliberate ingestion of excessive quantities may result in gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

Please see Section 14 for additional details.

Medical Conditions Aggravated by Exposure

Preexisting skin disorders may be aggravated by exposure to this product.

4. FIRST AID MEASURES

Eye Contact

In case of direct contact, flush eyes with clean water for at least 15 minutes. Seek medical attention if irritation or redness develops and persists.

Skin Contact

Remove contaminated clothing. Wash affected area thoroughly with soap and water. Seek medical attention if irritation or redness develops and persists.

Inhalation

If breathing difficulties develop, remove affected person away from source of exposure into fresh air. Seek medical attention.

Ingestion

Ingestion is an unlikely route of exposure under normal industrial conditions. However, if appreciable quantities of this product are accidentally swallowed, seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash Point (degree F)

Equal or greater than 200 F (Closed Cup)

Flash Point Category (OSHA/NFPA)

IIIB

Lower Flammability Limit in Air (% by Vol)

1.1

NOTE : Flash point value/category has been derived from testing of products of similar composition.

Extinguishing Media

Extinguish with a multipurpose fire fighting foam, dry chemical or carbon dioxide.

Fire Fighting Instructions

The use of self-contained breathing apparatus is recommended for firefighters. Water spray may be used to cool containers exposed to heat near flame. Avoid spreading burning liquid with water used for cooling purposes.

Fire and Explosion Hazards

This product will support combustion and may be ignited by extreme heat or flame. Closed containers may build up pressure and rupture when subjected to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Keep unnecessary personnel away from spill area. Ventilate area of spill; use appropriate personal protective equipment.

For large spills, contain the spill by diking with sand or other inert material. Keep out of drains, sewers or waterways. Transfer product to suitable containers for recovery or disposal. Do not flush area with water. If necessary, follow emergency response procedures.

For small spills; do not flush with water; use an inert absorbent material.

7. HANDLING AND STORAGE

Keep containers tightly closed. Keep containers cool and dry. Protect from freezing. Use and store this product with adequate ventilation. Use appropriate protective equipment when handling this product and maintain good personal hygiene practices.

This product contains vegetable oil ingredients. Rags or waste paper containing natural, oxidizing vegetable oils can burn spontaneously. Store wiping rags containing this product in metal cans with tight lids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Provide adequate general (dilution) and/or local exhaust ventilation. It is suggested that a source of clean water be made available in work area for flushing eyes and skin.

Personal Protective Equipment

Eye / Face Protection

The use of chemical splash goggles or safety glasses is recommended to prevent eye contact.

Skin Protection

The use of impermeable, solvent resistant gloves is advised to prevent skin contact. Use chemical resistant apron if splash hazard exists.

Respiratory Protection

Respiratory protection is typically not required under conditions of normal use. However, unusually high concentrations of vapor may require respiratory protection.

Established Exposure Guidelines

No ACGIH or OSHA exposure guidelines have been established for any of the components in this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point / Range (degree F)	300 F - 578 F
Typical Density (lbs/gal)	8.33
Vapor Density (excluding water) vs. Air	Heavier
Evaporation Rate (vs. Butyl Acetate)	Not Applicable
Appearance	Blue Paste
Volatile Organic Compounds (wt%) - EPA Method 24	4.80
NOTE : Value derived from Method 24 data on components.	

10. STABILITY AND REACTIVITY

Stability

Stable. Hazardous polymerization will not occur.

Conditions to Avoid

Keep product away from heat, sparks, and open flames.

Incompatibility

This product is incompatible with strong acids or bases and oxidizing agents.

Hazardous Decomposition Products

By high heat and fire: carbon dioxide, carbon monoxide and/or oxides of nitrogen and sulfur.

11. TOXICOLOGY OF COMPONENTS

Toxicological information is presented only for the hazardous components identified in Section 2 of the MSDS.

12. DISPOSAL CONSIDERATIONS

Dispose of product in accordance with local, county, state and federal environmental regulations. Do not introduce this product directly into public sewer systems.

Emptied containers may retain product residues, all precautions given in this data sheet should be observed.

13. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

The chemical components of this product are listed or have been registered for inclusion on the Section 8(B) Chemical Substance Inventory List (40 CFR 710).

EPCRA Section 313 Supplier Notification

This product does not contain any substances in quantities which must be reported under the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

Clean Air Act Amendment (HAPs)

This product does not contain any substances which are defined as Hazardous Air Pollutants under Title III of the Clean Air Act Amendments of 1990.

Clean Air Act Amendment (ODC's)

This product does not contain and is not manufactured with any of the ozone depleting chemicals listed under Section 602 of the Clean Air Amendments of 1990.

California Proposition 65

This product does not contain any chemicals which are defined by the state of California to cause cancer and/or reproductive toxicity.

CONEG

This product is certified to be in full compliance with CONEG Model Toxics Legislation for packaging and packaging components.

OSHA Hazard Communication Label for Product

THIS PRODUCT DOES NOT CONTAIN ANY HAZARDOUS COMPONENTS AS DEFINED BY OSHA, 29 CFR 1910.1200

Please refer to the MSDS for more details.

Keep away from heat and flame.

Keep containers closed.

Use with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Use appropriate personal protective equipment.

Wash thoroughly after handling.

FIRST AID : In case of contact, flush eyes or skin with plenty of water.

Remove contaminated clothing. Seek medical attention if irritation develops or persists. If inhaled, remove to fresh air. Seek medical attention if breathing difficulties develop.

IN CASE OF FIRE, use a multipurpose fire fighting foam, dry chemical or carbon dioxide.

Empty containers may retain product residues, all hazard precautions given on this label should be observed.

DO NOT REMOVE THIS LABEL.

14. ADDITIONAL COMMENTS

This product contains a petroleum middle distillate. Similar composition middle distillates have been found to be weakly to moderately tumorigenic in mouse skin painting bio-assays. It is suspected these tumors may be due part to chronic skin irritation resulting from continuous contact with the test substance.

The International Agency for Research on Cancer has concluded that light and intermediate middle distillates are Group 3 substances, "not classifiable as to their carcinogenicity to humans," based on inadequate human and inadequate animal evidence.

This material is not carcinogenic according to the OSHA Hazard Communication Standard.

Hazardous Materials Information System (HMIS)

Health 1

Flammability 1

Reactivity 0

NOTICE : These ratings are intended only for the immediate and general identification of acute hazards. Sun Chemical is providing this information on a voluntary basis as a guide for our customers. The use and interpretation of this information may vary from company to company. All information contained in this data sheet should be considered in order to adequately deal with the safe handling of this material.

Revision Date

05/25/06

The information presented in this data sheet represents a compilation of information generated from our suppliers and other recognized sources of scientific evidence and chemical information. To the best of our knowledge and belief, it is accurate and reliable as of the date of issue. However, no warranty, express or implied, including any warranty of merchantability, fitness for any use, or any other guarantee is offered or implied regarding the accuracy of such data, the results to be obtained from the use thereof, the safety of this product, or the hazards connected with the use of this material. Since the conditions of handling and use of this material are beyond our control, Sun Chemical shall assume no

RE : PRP50005-R - ROTARY PMS 661-U BLUE

Sun Chemical Corporation
631 CENTRAL AVENUE
CARLSTADT, NJ 07072

January 18, 2007

HEALTH AND SAFETY DEPT

Dear Customer:

The Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard requires employers to inform their personnel of the hazards of chemicals used in the workplace. Material Safety Data Sheets (MSDS) are one means required by OSHA to provide the necessary information.

As part of Sun Chemical's program to communicate health and safety information to our customers, we have enclosed our most current Material Safety Data Sheet. This MSDS meets the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

In addition, Section 13 of the enclosed MSDS provides supplier notification information required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (40 CFR 372). This legislation (also referred to as SARA, the Superfund Amendments and Reauthorization Act) requires certain manufacturers to report on annual emissions of specified toxic chemicals and chemical categories.

We would like to remind you that OSHA regulations require information contained in this MSDS to be communicated and made accessible to your employees. We suggest you read the enclosed material and forward it to the appropriate personnel within your company. Any copies or other redistribution of the data sheet must include the EPCRA Section 313 supplier notification.

In accordance with these regulations and Sun Chemical's hazard communication program, we will continue to forward updated MSDS's to your attention for those products which you purchase. Additional copies of the enclosed MSDS and product specifications may be obtained by calling (201) 933-4500. Should you have any questions related to the content of the data sheet or for additional compliance information please contact our Regulatory Group at (201) 933-4500. Emergency Call Chemtrec (800) 424-9300 US, Outside US (703) 527-3887. Medical Emergency (703) 527-3887.

MSDS Distribution Department

Health	1
Fire hazard	1
Reactivity	0
Personal protection	



Material Safety Data Sheet

1. Product and company identification

Product code : PRI90084B/K333
Product name : SOY INSERT DENSE BLACK
Material uses : Printing, Colorant.
Manufacturer/ Distributor : Sun Chemical Corporation
631 Central Avenue
Carlstadt, NJ 07072
In case of emergency : (800) 424-9300 (U.S.)
(703) 527-3887 (International)
Regulatory information : Canada: (905) 796-2222
US: (201) 933-4500
Other information : (513) 830-8500
Date of revision : 8/8/2014.

2. Hazards identification

Physical state : Liquid.

Color : Black.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency overview : No known significant effects or critical hazards.

Routes of entry : Dermal contact, Inhalation.

Potential acute health effects

Eyes : May cause mild eye irritation.

Skin : May cause mild skin irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : No known significant effects or critical hazards.

Potential chronic health effects (Long term exposure)

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

See toxicological information (Section 11)

3. Composition/information on ingredients

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Products of combustion** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Flammability (OSHA criteria)** : III B
- Flash point** : Lowest known value: >93.3 °C (200 °F) (Closed cup)

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
- Special remarks on fire hazards** : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Soybean oil)

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Not available.
- Boiling/condensation point** : Lowest known value: 288°C (550°F)
- Melting/freezing point** : May start to solidify at the following temperature: >300°C (>572°F) This is based on data for the following ingredient: C.I. Pigment Blue 61. Weighted average: 218.25°C (424.9°F)
- Flash point** : Lowest known value: >93.3°C (200°F) (Closed cup)
- VOC** : 25%
- Auto-ignition temperature** : Lowest known value: 225°C (437°F) (Hydrotreated Middle Distillate).
- Density** : 0.86 g/cm³ (9.059 lbs/gal)
- Vapor density** : Highest known value: >1 (Air = 1) (Soybean oil). Weighted average: 1.1 (Air = 1)

9. Physical and chemical properties

Evaporation rate : Highest known value: <1 (Soybean oil) Weighted average: 0.9 compared with butyl acetate

10. Stability and reactivity

Stability and reactivity : The product is stable.
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
 Reactivity - Light : Not applicable.
 Conditions of reactivity :

11. Toxicological information

Acute toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : No known significant effects or critical hazards

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

12. Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Refer to protective measures listed in sections 7 and 8.
 Empty containers or liners may retain some product residues.

14 . Transport information

Not regulated.

15 . Regulatory information

HCS Classification : Not regulated.
 TSCA 8(b) inventory : Listed
 U.S. Federal regulations : TSCA 4(a) final test rules: C.I. Pigment Blue 61; Polytetrafluoroethylene
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 TSCA 8(a) PAIR: naphthalene
 TSCA 12(b) one-time export: C.I. Pigment Blue 61
 TSCA commerce control list: Not listed
 SARA 302/304: Hydroquinone
 SARA 311/312 Hazards Identification: Not regulated.
 Clean Water Act (CWA) 307: naphthalene, benzene
 Clean Water Act (CWA) 311: naphthalene, benzene

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Supplier notification	: None identified.		

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

CONEG : In compliance.

International lists

International lists : ~~C~~anada inventory: All components are listed or exempted.
 Australia Inventory (AICS): At least one component is not listed.
 China Inventory (IECSC): At least one component is not listed.
 Japan inventory: Not determined.
 Korea inventory: All components are listed or exempted.
 New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
 Philippines inventory (PICCS): At least one component is not listed.
 Europe Inventory: Please contact your supplier to get the information.

16 . Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.) :

Health	1
Fire hazard	1
Reactivity	0
Personal protection	

Version : 1.01

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

PRI90084B

16 . Other information

VOLATILE COMPONENT INFORMATION

		US EPA Designate
A. Product Density:		
1.)	1.086 g/cm ³ (9.059 lbs/gal)	=(Dc)s
B. Nonvolatile Content:		
1.)	96.73 Weight percent of nonvolatiles in product	=(Wn)s
2.)	95.92 Volume percent of nonvolatiles in product	=(Vn)s
3.)	9.13 Density, lb nonvolatiles/gal nonvolatiles	=(Dn)s
C. Volatiles:		
1.)	3.27 Weight percent of total volatiles in product	=(Wv)s
2.)	7.26 Density, lb volatiles/gal volatiles	=(Dv)s
D. Water Content:		
1.)	0.02 Weight percent of water in product	=(Ww)s
2.)	0.02 Volume percent of water in product	=(Vw)s
E. Volatile Organic Compounds, (VOCs):		
1.)	3.25 Weight percent of organic volatiles in product	=(Wo)s
2.)	4.05 Volume percent of organic volatiles in product	=(Vo)s
3.)	7.26 Density, lb organic volatiles/gal organic volatiles	=(Do)s
4.)	99.39 Weight percent of VOCs in total volatiles	=(Wo)v
5.)	99.39 Volume percent of VOCs in total volatiles	=(Vo)v
F. VOC Content in Product Expressed in Other Terms:		
1.) a.)	0.29 lb VOC / gal Product	
1.) b.)	35.28 grams VOC / liter Product	
2.) a.)	0.3 lb VOC / gal Product less water & exempt solvent	
2.) b.)	35.43 grams VOC / liter Product less water & exempt solvent	
2.) c.)	3.25 Weight percent of organic volatiles (VOC) in Product less water & exempt solvents.	
3.)	0.31 lb VOC / gal total nonvolatiles	

G. Volatiles

Ingredient	CAS number	% by weight	Density (lb/gal)
1) Hazardous Air Pollutants VOCs (HAPs)		0	
2) Other VOCs (Non-HAPs)			
Hydrotreated Middle Distillate	64742-46-7	1.58	7.17
2,2,4-tri-Methyl-1,3-Pentanediol Di-isobutyrate	6846-50-0	1	7.87
LIGHT HYDROTREATED PETROL Distillate	64742-47-8	0.65	6.59 to 6.84
VOC's present at <0.10% (cumulative)		0.01	6.8
3) water	7732-18-5	0.02	8.34
4) Ammonia (reported as CAS# 7664-41-7; includes CAS# 1336-21-6)	7664-41-7	0	5.99
5.) Other Non-VOC, Non-HAP Volatiles		0	

NOTE: The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.

Sun Chemical Latin America
Parque Ind. Comandante,

Carolina
USA

PR
00984

SunChemical®
a member of the DIC group 

000002

CCL LABEL (SAN GERMAN), INC.
PARQUE INDUSTRIAL EL RETIRO
SAN GERMAN, PR 00683
Puerto Rico

March 30, 2015

Save Money! Be Green! Receive MSDS electronically!
Email your request to regulatory.emsds@sunchemical.com

Ayez une pensée pour l'environnement ! Gagnez du temps et de l'argent !
Recevez vos FDS par voie électronique! Envoyez vos demandes à regulatory.emsds@sunchemical.com

Ahorra dinero! Cuida el medio ambiente! Recibe las Hojas de Seguridad por correo electrónico!
Envoyez vos demandes a regulatory.emsds@sunchemical.com

Sparen Sie Geld! Handeln Sie umweltbewußt! Fordern Sie Sicherheitsdatenblätter in elektronischer Form an.
Richten Sie Ihre E-Mail an: regulatory.emsds@sunchemical.com

Risparmia soldi! Sii ecologico! Ricevi MSDS in formato elettronico!
Invia la tua richiesta all'indirizzo regulatory.emsds@sunchemical.com

Poupe dinheiro! Seja verde! Receba as F.D.S. electronicamente!
Envie o seu pedido para o email regulatory.emsds@sunchemical.com



MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the American National Standards Institute Standard for MSDS's (ANSI Z399.1)

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION																												
Manufactured by: Superior Printing Ink Co., Inc. Address: 100 North Street Teterboro, NJ 07608	Identity (Trade name as used on label) Product Class: Oxidizing Offset Inks Trade name: ELITE PRECISION PANTONE® COLORS Item Nos.: All Codes (see page 2)																											
Date Prepared: October 20, 2014		Prepared By: Charmain Page-Waltrus																										
Information Calls: (201) 478-5600		DOT Emergency Response: (201) 478-5600																										
SECTION 2 – HAZARDS IDENTIFICATION																												
Emergency Overview: Colored paste with mild odor. Can cause skin, eye, or respiratory tract irritation. Combustible – may burn, but will not ignite readily; fire fighters should be equipped with self contained breathing apparatus and turnout gear.																												
Potential Health Effects: Skin – Prolonged or repeated contact with liquid can cause irritation and/or dermatitis. Eyes – Vapors and splashes to the eyes are moderately irritating. Inhalation – Irritating to the respiratory tract and mucous membranes. Ingestion – Causes irritation to the gastrointestinal tract; symptoms may include nausea, vomiting and diarrhea.																												
Conditions Aggravated by Exposure: Persons with pre-existing skin disorders may be more susceptible to the effects of exposure.																												
SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS																												
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 40%;">Component</th> <th style="width: 30%;">CAS Number</th> <th style="width: 30%;">Wt. %</th> </tr> </thead> <tbody> <tr> <td>Vegetable Oils</td> <td>Mixture</td> <td>19 – 40</td> </tr> <tr> <td>Sweetened Middle Distillate</td> <td>64741-86-2</td> <td rowspan="2">2 – 28</td> </tr> <tr> <td>Technical White Oil</td> <td>8042-47-5</td> </tr> <tr> <td>Resins</td> <td>Mixture</td> <td>21 – 38</td> </tr> <tr> <td>Pigments</td> <td>Mixture</td> <td>14 – 30</td> </tr> <tr> <td>Warm Red Pigment (Barium Compound)</td> <td>5160-02-1 / 7585-41-3</td> <td>29 / 25</td> </tr> <tr> <td>Additives</td> <td>Mixture</td> <td>4 – 10</td> </tr> <tr> <td>Manganese Compound</td> <td>27253-32-3; 15956-58-8</td> <td>0.5 – 2</td> </tr> </tbody> </table>			Component	CAS Number	Wt. %	Vegetable Oils	Mixture	19 – 40	Sweetened Middle Distillate	64741-86-2	2 – 28	Technical White Oil	8042-47-5	Resins	Mixture	21 – 38	Pigments	Mixture	14 – 30	Warm Red Pigment (Barium Compound)	5160-02-1 / 7585-41-3	29 / 25	Additives	Mixture	4 – 10	Manganese Compound	27253-32-3; 15956-58-8	0.5 – 2
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SECTION 4 – FIRST AID MEASURES																												
Eye Contact: Immediately flush with water for at least 15 minutes; seek medical attention.		Ingestion: If swallowed, seek immediate medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.																										
Skin Contact: Remove contaminated clothing; launder before re-use. Wash skin with soap and water; if irritated, seek medical attention.		Inhalation: Immediately remove to fresh air. Seek medical attention.																										
SECTION 5 – FIRE FIGHTING MEASURES																												
Flash Point(°F): > 200 SETA CC	Auto Ignition Temperature: No Data	Explosion Limits: No Data																										
Extinguisher Media: Foam, dry chemical; use water spray to cool exposed surfaces. When water is used, fog nozzles are preferable.																												
Unusual Fire & Explosion Hazards: Dense smoke may be generated when burning. Vapors are heavier than air and can accumulate in low areas. Fire media run-off can damage the environment. Dike and collect media used to fight fire.																												

SECTION 6 – ACCIDENTAL RELEASE MEASURES

For small incidental spills and leaks, wear protective gloves and eye protection. Stop source of leak or spill. Isolate area of spill by diking, and/or add dry absorbent to prevent it from entering sewers, drains or waterways. Clean up and place in an appropriate container for disposal. Wash all contaminated clothing before reuse, discard contaminated leather shoes.

For larger spill requiring emergency response, follow OSHA emergency response regulations and NIOSH recommendations. If possible, stop source of spill or release. Isolate the area of spill or release by diking to prevent it from entering sewers, drains or waterways. Clean up and place in a container approved for oily waste for disposal.

SECTION 7 – HANDLING/STORAGE

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Wash hands thoroughly before eating, smoking or using toilet facilities. Do not eat, drink or smoke in work areas. Wash contaminated work clothing before reuse. Keep container closed when not in use. Use only with adequate ventilation. Store in a cool, dry, well-ventilated area.

SECTION 8 – EXPOSURE CONTROL AND PERSONAL PROTECTION

Ventilation: Good, general ventilation should be sufficient for most operations. Ten or more room air changes per hour containing a minimum of 15 percent fresh air are recommended.

Personal Protection: Safety glasses and gloves impervious to the hazardous ingredients are recommended. If used under normal operating conditions, and with adequate ventilation, respiratory equipment is not required. Avoid excessive inhalation of ink mist.

OIL MIST	
OSHA TLV	ACGIH PEL
5 mg/m ³	5mg/m ³

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colored Paste

TYPE OF ODOR: Mild

LIQUID DENSITY vs. water: Heavier

VAPOR DENSITY vs. air: Heavier

BOILING RANGE (°F): 520 – 578

pH: 6 – 8

EVAPORATION RATE vs. Butyl Acetate: Slower

SOLUBILITY IN WATER: None

COLOR	PRODUCT №	VOC, WT. %	SPECIFIC GRAVITY	LBS/GAL	VOC LBS/GAL
YELLOW	YA-2000	15.0	0.98	8.23	1.42
WARM RED	MRA-1000	11.2	1.11	9.28	1.11
WARM RED COATABLE	MRA-1001	10.5	1.08	9.03	1.69
RUBINE RED	DRA-1000	22.3	1.02	8.50	2.00
RUBINE RED COATABLE	DRA-1001	15.8	1.01	8.44	0.89
RHODAMINE RED	DRA-2000	13.6	1.09	9.08	1.27
RHODAMINE RED COATABLE	DRA-2001	10.9	1.04	8.66	0.93
PURPLE	PA-1000	19.7	1.04	8.66	1.64
PURPLE COATABLE	PA-1001	6.2	1.02	8.49	0.65
VIOLET	PA-2000	22.7	1.06	8.82	2.03
VIOLET COATABLE	PA-2001	2.0	1.03	8.60	0.13
PROCESS BLUE	MBA-1000	11.9	1.09	9.08	2.36
REFLEX BLUE	DBA-1000	18.2	1.03	8.57	1.34
REFLEX BLUE COATABLE	DBA-1001	8.8	1.06	8.87	1.55
GREEN	MGA-1000	23.5	1.08	9.00	2.34
TRANSPARENT WHITE	W-1000	28.4	0.95	7.90	1.58
NEUTRAL BLACK	A-1000	15.6	1.09	9.07	1.80
PANTONE® 012C YELLOW	YC-3960	25.3	0.95	7.92	2.50
PANTONE® 021C ORANGE	OA-8553	13.6	1.07	8.92	1.20
PANTONE® 021C ORANGE COATABLE	OA-8585	12.8	1.06	8.84	1.10
PANTONE® 032C RED	MRC-4403	13.0	1.13	9.42	1.20
PANTONE® 032C RED COATABLE	MRC-4434	10.4	1.07	8.92	0.90
PANTONE® 072C BLUE	DBD-9639	15.1	1.00	8.34	1.30
PANTONE® 072C BLUE COATABLE	DBD-9691	5.9	1.08	9.01	0.50



MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the American National Standards Institute Standard for MSDSs (ANSI Z400.1)

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION																												
Manufactured by: Superior Printing Ink Co., Inc. Address: 100 North Street Teterboro, NJ 07608	Identity (Trade name as used on label) Product Class: Oxidizing Offset Inks Trade name: ELITE PRECISION PANTONE® COLORS Item Nos.: All Codes (see page 2)																											
Date Prepared: October 20, 2014	Prepared By: Charmain Page-Walthrus																											
Information Calls: (201) 478-5600	DOT Emergency Response: (201) 478-5600																											
SECTION 2 – HAZARDS IDENTIFICATION																												
Emergency Overview: Colored paste with mild odor. Can cause skin, eye, or respiratory tract irritation. Combustible – may burn, but will not ignite readily; fire fighters should be equipped with self contained breathing apparatus and turnout gear.																												
Potential Health Effects: Skin – Prolonged or repeated contact with liquid can cause irritation and/or dermatitis. Eyes – Vapors and splashes to the eyes are moderately irritating. Inhalation – Irritating to the respiratory tract and mucous membranes. Ingestion – Causes irritation to the gastrointestinal tract; symptoms may include nausea, vomiting and diarrhea.																												
Conditions Aggravated by Exposure: Persons with pre-existing skin disorders may be more susceptible to the effects of exposure.																												
SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS																												
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 40%;">Component</th> <th style="width: 30%;">CAS Number</th> <th style="width: 30%;">Wt. %</th> </tr> </thead> <tbody> <tr> <td>Vegetable Oils</td> <td>Mixture</td> <td>19 – 40</td> </tr> <tr> <td>Sweetened Middle Distillate</td> <td>64741-86-2</td> <td rowspan="2">2 – 28</td> </tr> <tr> <td>Technical White Oil</td> <td>8042-47-5</td> </tr> <tr> <td>Resins</td> <td>Mixture</td> <td>21 – 38</td> </tr> <tr> <td>Pigments</td> <td>Mixture</td> <td>14 – 30</td> </tr> <tr> <td>Warm Red Pigment (Barium Compound)</td> <td>5160-02-1 / 7585-41-3</td> <td>29 / 25</td> </tr> <tr> <td>Additives</td> <td>Mixture</td> <td>4 – 10</td> </tr> <tr> <td>Manganese Compound</td> <td>27253-32-3; 15956-58-8</td> <td>0.5 – 2</td> </tr> </tbody> </table>			Component	CAS Number	Wt. %	Vegetable Oils	Mixture	19 – 40	Sweetened Middle Distillate	64741-86-2	2 – 28	Technical White Oil	8042-47-5	Resins	Mixture	21 – 38	Pigments	Mixture	14 – 30	Warm Red Pigment (Barium Compound)	5160-02-1 / 7585-41-3	29 / 25	Additives	Mixture	4 – 10	Manganese Compound	27253-32-3; 15956-58-8	0.5 – 2
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SECTION 4 – FIRST AID MEASURES																												
Eye Contact: Immediately flush with water for at least 15 minutes; seek medical attention.		Ingestion: If swallowed, seek immediate medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.																										
Skin Contact: Remove contaminated clothing; launder before re-use. Wash skin with soap and water; if irritated, seek medical attention.		Inhalation: Immediately remove to fresh air. Seek medical attention.																										
SECTION 5 – FIRE FIGHTING MEASURES																												
Flash Point(°F): > 200 SETA CC	Auto Ignition Temperature: No Data	Explosion Limits: No Data																										
Extinguisher Media: Foam, dry chemical; use water spray to cool exposed surfaces. When water is used, fog nozzles are preferable.																												
Unusual Fire & Explosion Hazards: Dense smoke may be generated when burning. Vapors are heavier than air and can accumulate in low areas. Fire media run-off can damage the environment. Dike and collect media used to fight fire.																												

MATERIAL SAFETY DATA SHEET

Sun Chemical Corporation
KOHL & MADDEN – MINNEAPOLIS
782 29TH AVENUE SE
MINNEAPOLIS, MN 55414
UNITED STATES OF AMERICA

MSDS Distribution: (612) 378-4237
Regulatory Information: (201) 933-4500
Emergency Phone No.: (201) 804-8228
(24 hours)

1. PRODUCT IDENTIFICATION

Product Name	Relay Process Series items (<i>see attached list</i>)
Product Description	Printing Ink
Product Category	Sheetfed
MSDS Date	3/24/09

2. PRODUCT HAZARDS IDENTIFICATION

Physical state	: Liquid
OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Emergency Overview	: No known significant effects or critical hazards.
Routes of entry	: Dermal contact. Inhalation.
<u>Potential acute health effects</u>	
Eye	: May cause mild eye irritation.
Skin	: May cause mild skin irritation.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Carcinogenic effects	: No known significant effects or critical hazards.
Mutagenic effects	: No known significant effects or critical hazards.
Teratogenicity /	: No known significant effects or critical hazards.
Reproductive toxicity	
See toxicological information (section 11)	

-continued on next page- 1

MSDS – Generic

3. COMPOSITION (Hazardous Components)

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4. FIRST AID MEASURES

Eye Contact	: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin Contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	: Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.
Ingestion	: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.

5. FIRE FIGHTING MEASURES

Flammability of the product	: No specific hazard.
Products of combustion	: Decomposition products may include the following materials: carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ , etc.), sulfur oxides (SO ₂ , SO ₃ , etc.). Some metallic oxides.

Extinguishing Media**Suitable**

: Use an extinguishing agent suitable for the surrounding fire.

Not suitable

: None known.

Special exposure hazards

: Not available.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards

: Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Linseed Oil)

Flammability (OSHA criteria): IIIB**Flash Point**

: Lowest known value: >93.3°C (>200°F) Closed Cup (Tagliabue.)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up

: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. HANDLING AND STORAGE

**Handling
Storage**

: Wash thoroughly after handling.

: Keep container tightly closed. Keep container in a cool, well-ventilated area. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Linseed Oil)

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal Protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air, purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves comply with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Boiling/condensation point	: Lowest known value: 248.889°C (480°F)
Flash Point	: Lowest known value: >93.3°C (>200°F) Closed cup (Tagliabue.)
Auto-ignition temperature	: Lowest known value: 342.85°C (649.1°F) (Linseed Oil).
Density (lbs/gal)	: 1 g/cm ³ (8.347 lbs/gal)
Vapor density	: Highest known value: >1 (Air=1) (Soybean Oil) Weighted average: 1.1 (Air)
Evaporation rate	: Highest known value: <1 (Linseed Oil) Weighted average: 0.9 compared with Butyl acetate.

10. STABILITY AND REACTIVITY

Stability and reactivity : The product is stable.

Reactivity – Light : Not applicable.

11. TOXICOLOGICAL INFORMATION

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / : No known significant effects or critical hazards.

Reproductive toxicity

Irritant/Sensitization

Ingestion : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

No known significant effects or critical hazards.

Products of degradation : Decomposition of precuts may include the following materials: carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂, etc.), sulfur oxides (SO₂, SO₃, etc.). Some metallic oxides.

Toxicity of the products of biodegradation : The product itself and its products of degradation are not toxic.

13. DISPOSAL CONSIDERATIONS

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Refer to protective measures listed in sections 7 and 8.

Empty containers or liners may retain some product residues.

MSDS – Generic

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

HCS Classification	: Not regulated.
TSCA 8(b) Inventory	: Listed
U.S. Federal regulations	: TSCA 4(a) dioxins/furanes testing: No products were found. TSCA 4(a) final testing order: No products were found. TSCA 4(a) final test rules: No products were found. TSCA 4(a) ITC priority list: No products were found. TSCA 4(a) proposed test rules: No products were found. TSCA 5(a) final significant rules: No products were found. TSCA 5(a)2 proposed significant rules: No products were found. TSCA 5(e) substance consent order: No products were found. TSCA 6 final risk management: No products were found. TSCA 6 proposed risk management: No products were found. TSCA 8(a) CAIR: No products were found. TSCA 8(a) chemical risk rules: No products were found. TSCA 8(a) dioxin/furan precursor: No products were found. TSCA 8(a) IUR: No products were found. TSCA 8(a) PAIR: No products were found. TSCA 8(c) calls for record of SAR: No products were found. TSCA 8(d) H and S data reporting: No products were found. TSCA 12(b) annual export notification: No products were found. TSCA 12(b) one-time export: No products were found. TSCA precursor chemical list: No products were found. TSCA commerce control list: No products were found. Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
<u>Sara 313</u>	: None identified
CONEG	: In compliance

CANADA INVENTORY (DSL) : Listed
 AUSTRALIAN INVENTORY : Not determined.
 (AICS)
 CHINA INVENTORY (IECS) : Not determined.
 EC INVENTORY : Not determined.
 (EINECS/ELINCS)
 JAPAN INVENTORY (ENCS) : Not determined.
 KOREA INVENTORY (ECL) : Not determined.
 New Zealand Inventory : Not determined.
 (HASNO)
 PHILIPPINE INVENTORY : Not determined.
 (PICCS)

16. OTHER INFORMATION

Label requirements

: CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: BLOOD, KIDNEYS, RESPIRATORY TRACT, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

Hazardous Material Information System (U.S.A.)

:

Health	*	1
Fire hazard		1
Reactivity		0

Personal protection

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Sun Chemical Corporation
KOHL & MADDEN – MINNEAPOLIS
782 29TH AVENUE SE
MINNEAPOLIS, MN 55414
UNITED STATES OF AMERICA

March 24, 2009

To: Customer

RE: Relay Process Series items (see attached list)

Dear Customer:

The Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard requires employers to inform their personnel of the hazards of chemicals used in the workplace. Material Safety Data Sheets (MSDS) are one means required by OSHA to provide the necessary information.

As part of Sun Chemical's program to communicate health and safety information to our customers, we have enclosed our most current Material Safety Data Sheet. This MSDS meets the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

In addition, Section 13 of the enclosed MSDS provides supplier notification information required under Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 (40 CFR 372). This legislation (also referred to as SARA, the Superfund Amendments and Reauthorization Act) requires certain manufacturers to report on annual emissions of specified toxic chemicals and chemical categories.

We would like to remind you that OSHA regulations require information contained in this MSDS to be communicated and made accessible to your employees. We suggest you read the enclosed material and forward it to the appropriate personnel within your company. Any copies or other redistribution of the data sheet must include the EPCRA Section 313 supplier notification.

In accordance with these regulations and Sun Chemical's hazard communication program, we will continue to forward updated MSDS's to your attention for those products which you purchase. Additional copies of the enclosed MSDS and product specifications may be obtained by calling (508) 339-3526. Should you have any questions related to the content of the data sheet or for additional compliance information please contact our Regulatory Group at (201) 933-4500. Emergency health or spill response information can be obtained by calling (210) 804-8228 (24 hours).

MSDS Distribution Department

CODE	DESCRIPTION	VOC%
NSP4449R4	RELAY PROCESS BLACK	8
NSP4445A1	RELAY PROCESS CYAN	6
NSP4444A1	RELAY PROCESS MAGENTA	11
NSP4442A1	RELAY PROCESS YELLOW	13

Health	1
Fire hazard	1
Reactivity	0
Personal protection	



Material Safety Data Sheet

1. Product and company identification

Product code : FS2H804133
Product name : FS2H804133 V THERM DK BROWN G293
Material uses : Printing, Colorant.
Manufacturer/ Distributor : Sun Chemical Corporation
631 Central Avenue
Carlstadt, NJ 07072
In case of emergency : (800) 424-9300 (U.S.)
(703) 527-3887 (International)
Regulatory information : Canada: (905) 796-2222
US: (201) 933-4500
Other information : (513) 830-8500
Date of revision : 2/17/2015.

2. Hazards identification

Physical state : Liquid
Color : Brown
OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Emergency overview : No known significant effects or critical hazards.
Routes of entry : Dermal contact. Inhalation.
Potential acute health effects
Eyes : May cause mild eye irritation.
Skin : May cause mild skin irritation.
Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : No known significant effects or critical hazards.
Potential chronic health effects (Long term exposure)
Carcinogenic effects : No known significant effects or critical hazards.
Mutagenic effects : No known significant effects or critical hazards.
Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.
See toxicological information (Section 11)

3. Composition/information on ingredients

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4. First aid measures

- | | |
|-----------------------------------|--|
| Eye contact | : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur. |
| Skin contact | : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur. |
| Inhalation | : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur. |
| Ingestion | : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. |

5. Fire-fighting measures

- | | |
|---|---|
| Flammability of the product | : In a fire or if heated, a pressure increase will occur and the container may burst. |
| Products of combustion | : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides |
| Extinguishing media | |
| Suitable | : Use an extinguishing agent suitable for the surrounding fire. |
| Not suitable | : None known. |
| Special exposure hazards | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Flammability (OSHA criteria) | : IIIB |
| Flash point | : Lowest known value: >93.3°C (200°F) (Closed cup) |

6. Accidental release measures

- | | |
|----------------------------------|---|
| Personal precautions | : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8). |
| Environmental precautions | : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Methods for cleaning up | : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note see Section 1 for emergency contact information and Section 13 for waste disposal. |

7. Handling and storage

- | | |
|--|--|
| Handling | : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. |
| Storage | : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. |
| Special remarks on fire hazards | : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Soybean oil) |

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- | | |
|-----------------------------|---|
| Engineering measures | : Good general ventilation should be sufficient to control worker exposure to airborne contaminants. |
| Personal protection | |
| Eyes | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. |
| Skin | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory | : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. |
| Hands | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |

9. Physical and chemical properties

- | | |
|-----------------------------------|---|
| Physical state | : Liquid |
| Color | : Brown |
| Odor | : Not available |
| Boiling/condensation point | : Lowest known value: 288 °C (550 °F) |
| Melting/freezing point | : May start to solidify at the following temperature: 0 °C (32 °F) This is based on data for the following ingredient: Severely Treated Light Naphthenic Distillate |
| Flash point | : Lowest known value: >93.3 °C (200 °F) (Closed cup) |
| VOC | : 2.65% |
| Auto-ignition temperature | : Lowest known value: 342.85 °C (649.1 °F) (Linseed oil). |
| Density | : 0.906 g/cm ³ (8.844 lbs/gal) |
| Vapor density | : Highest known value: >1 (Air = 1) (Soybean oil). Weighted average: 1.1 (Air = 1) |

9 . Physical and chemical properties

Evaporation rate : Highest known value: <1 (Soybean oil) Weighted average: 0.9 compared with butyl acetate

10 . Stability and reactivity

Stability and reactivity : The product is stable.
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
 Reactivity - Light : Not applicable.
 Conditions of reactivity :

11 . Toxicological information

Acute toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Refer to protective measures listed in sections 7 and 8.
 Empty containers or liners may retain some product residues

14 . Transport information

Not regulated.

15. Regulatory information

HCS Classification : Not regulated.
 TSCA 8(b) inventory : Listed
 U.S. Federal regulations : TSCA 4(a) final test rules: Polytetrafluoroethylene
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 TSCA commerce control list. Not listed
 SARA 302/304: Hydroquinone
 SARA 311/312 Hazards identification: Not regulated.
 Clean Water Act (CWA) 307: 3,3'-dichlorobenzidine; benzene
 Clean Water Act (CWA) 311: benzene

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Supplier notification :	Barium Compounds	5160-02-1	2.34

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

CONEG : In compliance.

International lists

International lists : Canada inventory: All components are listed or exempted.
 Australia inventory (AICS): At least one component is not listed.
 China inventory (IECSC): At least one component is not listed.
 Japan inventory: At least one component is not listed.
 Korea inventory: At least one component is not listed.
 New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
 Philippines inventory (PICCS): At least one component is not listed.
 Europe inventory: Please contact your supplier to get the information.

16. Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.) :

Flammable	1
Fire hazard	1
Reactivity	0
Personal protection	

Version : 0.02

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

FS2H804133

VOLATILE COMPONENT INFORMATION

	US EPA Designate
A. Product Density:	
1.) 1.06 g/cm ³ (8.844 lbs/gal)	=(Dc)s
B. Nonvolatile Content:	
1.) 97.35 Weight percent of nonvolatiles in product	=(Wn)s
2.) 96.67 Volume percent of nonvolatiles in product	=(Vn)s
3.) 8.9 Density, lb nonvolatiles/gal nonvolatiles	=(Dn)s
C. Volatiles:	
1.) 2.65 Weight percent of total volatiles in product	=(Wv)s
2.) 7.01 Density, lb volatiles/gal volatiles	=(Dv)s
D. Water Content:	
1.) 0 Weight percent of water in product	=(Ww)s
2.) 0 Volume percent of water in product	=(Vw)s
E. Volatile Organic Compounds (VOCs):	
1.) 2.65 Weight percent of organic volatiles in product	=(Wo)s
2.) 3.34 Volume percent of organic volatiles in product	=(Vo)s
3.) 7.01 Density, lb organic volatiles/gal organic volatiles	=(Do)s
4.) 100 Weight percent of VOCs in total volatiles	=(Wo)v
5.) 100 Volume percent of VOCs in total volatiles	=(Vo)v
F. VOC Content in Product Expressed in Other Terms:	
1.) a.) 0.23 lb VOC / gal Product	
1.) b.) 28.08 grams VOC / liter Product	
2.) a.) 0.24 lb VOC / gal Product less water & exempt solvent	
2.) b.) 28.53 grams VOC / liter Product less water & exempt solvent	
2.) c.) 2.65 Weight percent of organic volatiles (VOC) in Product less water & exempt solvents.	
3.) 0.24 lb VOC / gal total nonvolatiles	

G. Volatiles

Ingredient	CAS number	% by weight	Density (lb/gal)
1.) Hazardous Air Pollutants VOCs (HAPs)		0	
2.) Other VOCs (Non-HAPs)			
Severely Treated Light Naphthenic Distillate	64742-53-6	1.25	7.34
Technical White Oil	8042-47-5	0.61	6.76
Tridecyl Alcohol	112-70-9	0.55	6.84
Hydrotreated Middle Distillate	64742-46-7	0.14	7.17
Tall Oil Fatty Acids	61790-12-3	0.01	7.59
VOC's present at <0.10% (cumulative)		0.09	7.71
3.) water	7732-18-5	0	8.34
4.) Ammonia (reported as CAS# 7664-41-7; includes CAS# 1336-21-6)	7664-41-7	0	5.99
5.) Other Non-VOC, Non-HAP Volatiles		0	

NOTE: The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.

SAFETY DATA SHEET

Section 1. Identification

Product code : INT24
GHS product identifier : INTENSE BLACK S9800
Trade name : SunLit® Intense
INT 24 PROCESS BLACK

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Colorant, Printing ink related material, Printing ink.

Manufacturer / Distributor : Sun Chemical Corporation
North American Inks
135 West Lake Street
Northlake, IL 60164
US: +1 866 786 8140

Emergency telephone : (800) 424-8300 (U S) (24 hours)
number (with hours of : (703) 527-3887 (International) (24 hours)
operation)
Other information : (513) 830-8500

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Classification of the : Not classified.
substance or mixture

GHS label elements

Signal word : No signal word.
Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Hazards not otherwise : None known.
classified

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	CAS number	%
Carbon Black	1333-86-4	20 - 25
Neodecanoic Acid, Manganese Salt	27253-32-3	1 - 2.5
2,2 Methylenebis(4-methyl-6-terbutyl)phenol	119-47-1	< 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most Important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards
- Ingestion** : No known significant effects or critical hazards

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst

Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials.
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Remarks** :

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 7. Handling and storage

Remarks: : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Soybean oil)

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Carbon Black	ACGIH TLV (United States, 4/2014). TWA: 3 mg/m ³ 8 hours Form: Inhalable fraction OSHA PEL (United States, 2/2013). TWA: 3.5 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 3.5 mg/m ³ 8 hours.
Neodecanoic Acid, Manganese Salt	ACGIH TLV (United States, 4/2014). TWA: 0.1 mg/m ³ , (as Mn) 8 hours Form: Inhalable fraction ACGIH TLV (United States, 4/2014). Notes: as Mn TWA: 0.02 mg/m ³ , (as Mn) 8 hours Form: Respirable fraction OSHA PEL (United States, 2/2013). Notes: as Mn CEIL: 5 mg/m ³ , (as Mn) OSHA PEL 1989 (United States, 3/1989). Notes: as Mn CEIL: 5 mg/m ³ , (as Mn)

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eyeface protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Characteristic.
- Odor threshold** : Not applicable.
- pH** : Not tested
- Melting point** : Not available.
- Boiling point** : Lowest known value: 288°C (550°F)
- Flash point** : Lowest known value: >93.3°C (200°F)
- VOC** : 0%
- Evaporation rate** : Highest known value: <1 (Soybean oil) Weighted average: 0.9 compared with butyl acetate
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not tested
- Vapor pressure** : Not available
- Vapor density** : Not tested
- Density** : 1.095 g/cm³ (9.135 lbs/gal)
- Solubility** : Not tested
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not applicable
- Decomposition temperature** : Not applicable.
- Viscosity** : Not tested

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Carbon Black	LD50 Dermal	Rabbit	>3 g/kg	-
2,2 Methylenebis (4-methyl-6-tertbutyl)phenol	LD50 Oral	Rat	>15400 mg/kg	-
	LD50 Oral	Rat	4880 mg/kg	-

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : No known significant effects or critical hazards.
 Eyes : No known significant effects or critical hazards.
 Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards
 Respiratory : No known significant effects or critical hazards

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards

Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon Black	-	2B	-

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
 Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
 Skin contact : No known significant effects or critical hazards.
 Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data
 Inhalation : No specific data
 Skin contact : No specific data

Section 11. Toxicological information

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	19329.8 mg/kg

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available

Bioaccumulative potential

Product/Ingredient name	LogP _{ow}	BCF	Potential
2,2 Methylenebis (4-methyl-6-tertbutyl)phenol	6.25	-	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number					
UN proper shipping name					
Transport hazard class(es)	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
Packing group	-	-	-	-	-
Environmental hazards	No	No	No	No	No
Additional information	-	-	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

TSCA 8(b) inventory : Listed
U.S. Federal regulations : TSCA 4(a) final test rules Polytetrafluoroethylene
 Clean Water Act (CWA) 307 C.I. Pigment Blue 15
 Clean Water Act (CWA) 311 formaldehyde

SARA 313

	Product name	CAS number	%
Supplier notification	Manganese Compounds	27253-32-3	1.35

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Toxics in Packaging (CONEG) : In compliance.

Canada inventory : All components are listed or exempted

International regulations

Section 15. Regulatory information

International lists : Australia inventory (AICS): At least one component is not listed.
 China inventory (IECSC): Not determined.
 Japan inventory: Not determined.
 Korea inventory: Not determined.
 Malaysia inventory (EHS Register): Not determined.
 New Zealand inventory of Chemicals (NZIoC): At least one component is not listed.
 Philippines inventory (PICCS): Not determined.
 Taiwan inventory (CSNN): Not determined.
 Europe inventory: Please contact your supplier to get the information.

Section 16. Other information

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue/Date of revision : 5/18/2015.

Date of previous issue : 4/28/2015.

Version : 3

Regulatory information : Canada: (905) 796-2222
 US: (201) 933-4500
 PPG: (513) 681-5950

Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpo" = marine pollution)
 UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

INT24

Abstract

Product code : FS2H804636
GHS product identifier : V-THERM PMS 4635-U B

Identified uses	Colorant, Printing ink related material, Printing ink.
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Emergency telephone number (with hours of operation) : (800) 424-9300 (U S) (24 hours)
(703) 527-3887 (International) (24 hours)

Other information : (513) 830-8500

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910 1200)
Classification of the substance or mixture	: SKIN SENSITIZATION - Category 1

Hazard pictograms



Precautionary statements

Hazards not otherwise classified : None known

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

Ingredient name	CAS number	%
Carbon Black	1333-86-4	2.5 - 5
Hydroquinone	123-31-9	< 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remarks :

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used, without Personal Protective Equipment measures. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
- Remarks:** : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside (Soybean oil).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Carbon Black	ACGIH TLV (United States, 4/2014). TWA 3 mg/m ³ 8 hours. Form Inhalable fraction. OSHA PEL (United States, 2/2013). TWA 3.5 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA 3.5 mg/m ³ 8 hours.
Hydroquinone	ACGIH TLV (United States, 4/2014). Skin sensitizer. TWA 1 mg/m ³ 8 hours. OSHA PEL (United States, 2/2013). TWA 2 mg/m ³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA 2 mg/m ³ 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eyeface protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid
Color : Brown
Odor : Characteristic
Odor threshold : Not applicable
pH : Not tested
Melting point : Not available
Boiling point : Lowest known value 288°C (550°F)
Flash point : Lowest known value >93.3°C (200°F)
VOC : 1.17%
Evaporation rate : Highest known value <1 (Soybean oil) Weighted average 0.9 compared with butyl acetate
Flammability (solid, gas) : Not available
Lower and upper explosive (flammable) limits : Not tested
Vapor pressure : Not available
Vapor density : Not tested

Section 9. Physical and chemical properties

Density : 1.044 g/cm³ (8.713 lbs/gal)
 Solubility : Not tested
 Partition coefficient: n-octanol/water : Not applicable
 Auto-ignition temperature : Not applicable
 Decomposition temperature : Not applicable
 Viscosity : Not tested

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur

Conditions to avoid : No specific data

Incompatible materials : No specific data

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Carbon Black	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
Hydroquinone	LD50 Oral	Rat	302 mg/kg	-

Conclusion/Summary : No known significant effects or critical hazards

Irritation/Corrosion

Conclusion/Summary

Skin : No known significant effects or critical hazards
 Eyes : No known significant effects or critical hazards
 Respiratory : No known significant effects or critical hazards

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards
 Respiratory : No known significant effects or critical hazards

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon Black	-	2B	-
Hydroquinone	-	3	-

Section 11. Toxicological information

Reproductive toxicity

Conclusion/Summary :

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

Eye contact : No known significant effects or critical hazards

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction

Ingestion : No known significant effects or critical hazards

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards

Mutagenicity : No known significant effects or critical hazards

Teratogenicity : No known significant effects or critical hazards

Developmental effects : No known significant effects or critical hazards

Fertility effects : No known significant effects or critical hazards

Numerical measures of toxicity

Acute toxicity estimates

Not available

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Not available

Persistence and degradability

Not available

Bioaccumulative potential

Product/Ingredient name	LogP _{ow}	BCF	Potential
Hydroquinone	0.59	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available

Other adverse effects : No known significant effects or critical hazards

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number					
UN proper shipping name					
Transport hazard class(es)	Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Packing group	-	-	-	-	-
Environmental hazards	No	No	No	No	No
Additional information	-	-	-	-	-

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

TSCA 8(b) inventory	: Listed
U.S. Federal regulations	: TSCA 4(a) final test rules Polytetrafluoroethylene TSCA 8(a) PAIR naphthalene Clean Water Act (CWA) 307 benzene, 3,3'-dichlorobenzidine, naphthalene Clean Water Act (CWA) 311 benzene, naphthalene

	Product name	CAS number	%
Supplier notification	Barium Compounds	5160-02-1	5.07

Toxics in Packaging (CONEG) : In compliance.

International regulations

International lists

- : **Australia Inventory (AICS)** At least one component is not listed.
- China Inventory (IECSC)** At least one component is not listed.
- Japan Inventory** At least one component is not listed
- Korea Inventory** Not determined
- Malaysia Inventory (EHS Register)** Not determined
- New Zealand Inventory of Chemicals (NZIoC)** At least one component is not listed
- Philippines inventory (PICCS)** At least one component is not listed
- Taiwan Inventory (CSNN)** Not determined
- Europe Inventory:** Please contact your supplier to get the information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue/Date of revision : 6/2/2015
Date of previous issue : No previous validation
Version : 0.01

Section 16. Other information

Regulatory information : Canada (905) 796-2222
US (201) 933-4500
PPG (513) 681-5950

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships
1973 as modified by the Protocol of 1978 ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

FS2H#04636

Health	1
Fire hazard	1
Reactivity	0
Personal protection	



Material Safety Data Sheet

1. Product and company identification

Product code	: INT41
Product name	: INT41.INTENSE PROCESS YELLOW.C235
Material uses	: Printing. Colorant.
Manufacturer/ Distributor	: Sun Chemical Corporation 631 Central Avenue Carlstadt, NJ 07072
In case of emergency	: (800) 424-9300 (U.S.) (703) 527-3887 (International)
Regulatory information	: Canada: (905) 796-2222 US: (201) 933-4500
Other information	: (513) 830-8500
Date of revision	: 10/27/2014.

2. Hazards identification

Physical state	: Liquid.
Color	: Yellow.
OSHA/HCS status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Emergency overview	: No known significant effects or critical hazards.
Routes of entry	Dermal contact. Inhalation.
<u>Potential acute health effects</u>	
Eyes	: May cause mild eye irritation.
Skin	: May cause mild skin irritation.
Inhalation	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: No known significant effects or critical hazards.
<u>Potential chronic health effects (Long term exposure)</u>	
Carcinogenic effects	: No known significant effects or critical hazards.
Mutagenic effects	: No known significant effects or critical hazards.
Teratogenicity /	: No known significant effects or critical hazards.
Reproductive toxicity	
See toxicological information (Section 11)	

3 . Composition/information on ingredients

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Products of combustion** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Flammability (OSHA criteria)** : III B
- Flash point** : Lowest known value: >93.3°C (200°F) (Closed cup)

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling	: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
Storage	: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Special remarks on fire hazards	: Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Tung oil)

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Engineering measures	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
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Personal protection

Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory	: In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and chemical properties

Physical state	: Liquid.
Color	: Yellow.
Odor	: Not available.
Boiling/condensation point	: Lowest known value: 288°C (550°F)
Melting/freezing point	: May start to solidify at the following temperature: -12 to -3°C (10.4 to 26.6°F) This is based on data for the following ingredient: Fatty acids, vegetable-oil, Me esters. Weighted average: -7.5°C (18.5°F)
Flash point	: Lowest known value: >93.3°C (200°F) (Closed cup)
VOC	: 0.05%
Auto-ignition temperature	: Lowest known value: 342.85°C (649.1°F) (Linseed oil).
Density	: 0.956 g/cm ³ (8.813 lbs/gal)
Solubility	: Insoluble in the following materials: cold water and hot water.

9 . Physical and chemical properties

Vapor density : Highest known value: >1 (Air = 1) (Tung oil). Weighted average: 1.1 (Air = 1)
 Evaporation rate : Highest known value: <1 (Tung oil) Weighted average: 0.9 compared with butyl acetate

10 . Stability and reactivity

Stability and reactivity : The product is stable.
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
 Reactivity - Light : Not applicable.
 Conditions of reactivity :

11 . Toxicological information

Acute toxicity

Conclusion/Summary : No known significant effects or critical hazards

Chronic toxicity

Conclusion/Summary : No known significant effects or critical hazards

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Refer to protective measures listed in sections 7 and 8.
 Empty containers or liners may retain some product residues

14 . Transport information

Not regulated.

15 . Regulatory information

HCS Classification : Not regulated.
 TSCA 8(b) inventory : Listed
 U.S. Federal regulations : TSCA 4(a) final test rules: Polytetrafluoroethylene
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 TSCA 8(a) PAIR: 4-Methoxyphenol
 TSCA commerce control list: Not listed
 SARA 302/304: Hydroquinone; formaldehyde
 SARA 311/312 Hazards identification: Not regulated.
 Clean Water Act (CWA) 311: formaldehyde

SARA 313

	Product name	CAS number	Concentration
Supplier notification	Manganese Compounds	27253-32-3	1.35

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

CONEG : In compliance.

International lists

International lists : Canada inventory: All components are listed or exempted.
 Australia inventory (AICS): Not determined.
 China inventory (IECSC): Not determined.
 Japan inventory: At least one component is not listed.
 Korea inventory: Not determined.
 New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
 Philippines inventory (PICCS): Not determined.
 Europe Inventory: Please contact your supplier to get the information.

16 . Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.)	Health	1
	Fire hazard	1
	Reactivity	0
	Personal protection	

Version : 2.08

Notice to reader

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INT4

VOLATILE COMPONENT INFORMATION

US EPA
Designate

A. Product Density:

1.) 1.056 g/cm³ (8.813 lbs/gal)

=(Dc)s

B. Nonvolatile Content:

1.) 99.93 Weight percent of nonvolatiles in product

=(Wn)s

2.) 99.9 Volume percent of nonvolatiles in product

=(Vn)s

3.) 8.81 Density, lb nonvolatiles/gal nonvolatiles

=(Dn)s

C. Volatiles:

1.) 0.07 Weight percent of total volatiles in product

=(Wv)s

2.) 8.05 Density, lb volatiles/gal volatiles

=(Dv)s

D. Water Content:

1.) 0.02 Weight percent of water in product

=(Ww)s

2.) 0.02 Volume percent of water in product

=(Vw)s

E. Volatile Organic Compounds, (VOCs):

1.) 0.05 Weight percent of organic volatiles in product

=(Wo)s

2.) 0.06 Volume percent of organic volatiles in product

=(Vo)s

3.) 7.66 Density, lb organic volatiles/gal organic volatiles

=(Do)s

4.) 71.43 Weight percent of VOCs in total volatiles

=(Wo)v

5.) 75.07 Volume percent of VOCs in total volatiles

=(Vo)v

F. VOC Content in Product Expressed in Other Terms:

1.) a) 0 lb VOC / gal Product

1.) b.) 0.53 grams VOC / liter Product

2.) a) 0 lb VOC / gal Product less water & exempt solvent

2.) b.) 0.53 grams VOC / liter Product less water & exempt solvent

2.) c.) 0.05 Weight percent of organic volatiles (VOC) in Product less water & exempt solvents.

3.) 0 lb VOC / gal total nonvolatiles

G. Volatiles

Ingredient	CAS number	% by weight	Density (lb/gal)
1.) Hazardous Air Pollutants VOCs (HAPs)		0	
2.) Other VOCs (Non-HAPs)			
Linear Alcohol Alkoxylate	9003-13-8	0.05	7.71
3.) water	7732-18-5	0.02	8.34
4.) Ammonia (reported as CAS# 7664-41-7; includes CAS# 1336-21-6)	7664-41-7	0	5.99
5.) Other Non-VOC, Non-HAP Volatiles		0	

NOTE: The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.

Health	1
Fire hazard	1
Reactivity	0
Personal protection	

Material Safety Data Sheet

1. Product and company identification

Product code	: INT24
Product name	: INT24.INTENSE PROCESS BLACK.CD01
Material uses	: Printing. Colorant.
Manufacturer/ Distributor	: Sun Chemical Corporation 631 Central Avenue Carlstadt, NJ 07072
In case of emergency	: (800) 424-9300 (U.S.) (703) 527-3887 (International)
Regulatory information	: Canada: (905) 796-2222 US: (201) 933-4500
Other information	: (513) 830-8500
Date of revision	: 10/27/2014

2. Hazards identification

Physical state	: Liquid.
Color	: Black.
OSHA/HCS status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Emergency overview	: No known significant effects or critical hazards.
Routes of entry	Dermal contact. Inhalation.
<u>Potential acute health effects</u>	
Eyes	: May cause mild eye irritation.
Skin	: May cause mild skin irritation.
Inhalation	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: No known significant effects or critical hazards.
<u>Potential chronic health effects (Long term exposure)</u>	
Carcinogenic effects	: No known significant effects or critical hazards.
Mutagenic effects	: No known significant effects or critical hazards.
Teratogenicity /	
Reproductive toxicity	: No known significant effects or critical hazards.
See toxicological information (Section 11)	

3 . Composition/information on ingredients

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Skin contact** : In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Products of combustion** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Flammability (OSHA criteria)** : IIIB
- Flash point** : Lowest known value: >93.3°C (200°F) (Closed cup)

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
- Special remarks on fire hazards** : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. (Soybean oil)

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Personal protection**
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and chemical properties

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Not available.
- Boiling/condensation point** : Lowest known value: 288°C (550°F)
- Melting/freezing point** : May start to solidify at the following temperature: -12 to -3°C (10.4 to 26.6°F) This is based on data for the following ingredient: Fatty acids, vegetable-oil, Me esters. Weighted average: -7.5°C (18.5°F)
- Flash point** : Lowest known value: >93.3°C (200°F) (Closed cup)
- VOC** : 0%
- Auto-ignition temperature** : Lowest known value: 342.85°C (649.1°F) (Linseed oil).
- Density** : 0.92 g/cm³ (9.114 lbs/gal)
- Vapor density** : Highest known value: >1 (Air = 1) (Soybean oil). Weighted average: 1.1 (Air = 1)

9 . Physical and chemical properties

Evaporation rate : Highest known value: <1 (Soybean oil) Weighted average: 0.9 compared with butyl acetate

10 . Stability and reactivity

Stability and reactivity : The product is stable.
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.
 Reactivity - Light : Not applicable.
 Conditions of reactivity :

11 . Toxicological information

Acute toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Refer to protective measures listed in sections 7 and 8.
 Empty containers or liners may retain some product residues.

14 . Transport information

Not regulated.

15 . Regulatory information

HCS Classification	: Not regulated.	
TSCA 8(b) Inventory	: Listed	
U.S. Federal regulations	: TSCA 4(a) final test rules: Polytetrafluoroethylene	
	TSCA 8(a) CDR Exempt/Partial exemption: Not determined	
	TSCA commerce control list:	Not listed
	BARA 302/304: Hydroquinone, formaldehyde	
	SARA 311/312 Hazards identification: Not regulated.	
	Clean Water Act (CWA) 307: C.I. Pigment Blue 15	
	Clean Water Act (CWA) 311: formaldehyde	

SARA 313

<u>Product name</u>		<u>CAS number</u>	<u>Concentration</u>
Supplier notification	: Manganese Compounds	27253-32-3	1.35

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

CONEG : In compliance.

International lists

International lists

- : **Canada inventory**: All components are listed or exempted.
- Australia inventory (AICS)**: At least one component is not listed.
- China inventory (IECSC)**: Not determined.
- Japan inventory**: Not determined.
- Korea inventory**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: At least one component is not listed.
- Philippines inventory (PICCS)**: Not determined.
- Europe inventory**: Please contact your supplier to get the information.

16 . Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

**Hazardous Material
Information System (U.S.A.)**

Health	1
Fire hazard	1
Reactivity	0
Personal protection	

Version : 11.01

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

VOLATILE COMPONENT INFORMATION

US EPA
Designate**A. Product Density:**

1.)	1.092 g/cm ³ (9.114 lbs/gal)	=(Dc)s
-----	---	--------

B. Nonvolatile Content:

1.)	99.98 Weight percent of nonvolatiles in product	=(Wn)s
2.)	99.96 Volume percent of nonvolatiles in product	=(Vn)s
3.)	9.11 Density, lb nonvolatiles/gal nonvolatiles	=(Dn)s

C. Volatiles:

1.)	0.02 Weight percent of total volatiles in product	=(Wv)s
2.)	9.2 Density, lb volatiles/gal volatiles	=(Dv)s

D. Water Content:

1.)	0.02 Weight percent of water in product	=(Ww)s
2.)	0.02 Volume percent of water in product	=(Vw)s

E. Volatile Organic Compounds, (VOCs):

1.)	0 Weight percent of organic volatiles in product	=(Wo)s
2.)	0 Volume percent of organic volatiles in product	=(Vo)s
3.)	926.67 Density, lb organic volatiles/gal organic volatiles	=(Do)s
4.)	0 Weight percent of VOCs in total volatiles	=(Wo)v
5.)	0 Volume percent of VOCs in total volatiles	=(Vo)v

F. VOC Content in Product Expressed in Other Terms:

1.) a.)	0 lb VOC / gal Product	
1.) b.)	0 grams VOC / liter Product	
2.) a.)	0 lb VOC / gal Product less water & exempt solvent	
2.) b.)	0 grams VOC / liter Product less water & exempt solvent	
2.) c.)	0 Weight percent of organic volatiles (VOC) in Product less water & exempt solvents.	
3.)	0 lb VOC / gal total nonvolatiles	

G. Volatiles

Ingredient	CAS number	% by weight	Density (lb/gal)
1.) Hazardous Air Pollutants VOCs (HAPs)		0	
2.) Other VOCs (Non-HAPs)			
3.) water	7732-18-5	0.02	8.34
4.) Ammonia (reported as CAS# 7664-41-7; includes CAS# 1336-21-6)	7664-41-7	0	5.99
5.) Other Non-VOC, Non-HAP Volatiles		0	

NOTE: The term Volatile Organic Compounds (VOC) refers only to volatile organic materials as defined by the US EPA and does not include water, ammonia, acetone or other exempt solvents. Unless otherwise stated, the VOC values reported above are based on materials of construction.

Folding Area Adhesives

Material Safety Data Sheet

MSDS: 11319

MSDS: 11319 - CLYSAR SHRINK FILMS

Plant #: 404 Inertco ===== 4/23/96

Status: Pending

Revised: 12/02/95

Formula: NOT GIVEN

Part Number: NOT GIVEN

Specification: NOT GIVEN

Keyword: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

E.I. DUPONT DE NEMOURS & CO., INC., POLYMER PRODUCTS DEPT.

1007 MARKET STREET

Phone: 800-441-7515

WILMINGTON, DE 19898

Emergency: 800-441-3637

Supplier

E.I. DUPONT DE NEMOURS & CO., INC., POLYMER PRODUCTS DEPT.

1007 MARKET STREET

Phone: 800-441-7515

WILMINGTON, DE 19898

Emergency: 800-441-3637

Physical/Chemical Characteristics

Boiling Point: NG

Melting Point: NA

NOT APPLICABLE.

Freezing Point: NG

Pour Point: NG

Softening Point: NG

Specific Gravity: NA

NOT APPLICABLE.

Vapor Pressure: NG

Vapor Density: NG

Percent Volatiles: NE

NEGLIGIBLE.

Evaporation Rate: NG

pH: NG

Molecular Weight: NG

Viscosity: NG

Solubility in Water ..: NEGLIGIBLE.

Odor/Appearance/Other Characteristics: CLEAR TRANSPARENT FILM / NO ODOR.

Fire and Explosion Data

Closed Cup Flash Pt. ..: NG

Open Cup Flash Point ..: NG

Fire Point: NG

Auto Ignition: N*

NO INFORMATION.

Lower Explosion Limit : NG

Upper Explosion Limit : NG

Shipping Regulations

UN/NA Number: NG

DOT Hazard Class: NOT REGULATED

Shipping Label: NOT GIVEN

Shipping Name: NOT REGULATED

Material Safety Data Sheet

MSDS: 11819

MSDS: 11819 - CLYSAR SHRINK FILMS

Plant #: 404 Insertco ===== Page 2

Prepared

Preparer's Name & Title: T. E. SCHROER

Preparation Date: 3/15/92

Component(s):

POLYETHYLENE FILM

OSHA PEL: NE ppm NC mg/m3

ACGIH TLV: NE ppm NG mg/m3

STEL: NE ppm NC mg/m3

Percent of Product: NA

CAS NO.: NOT GIVEN

Note: CAS NO.: NOT APPLICABLE / OSHA & ACGIH STEL, DUPONT AEL: NE.

Text Section(s)

MATERIAL IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

PRODUCT NAME: Clysar(R) Shrink Films
Types LLP, XLP, HP

CHEMICAL NAME: Polyethylene film

CAS REGISTRY NUMBER: NA

TSCA INVENTORY STATUS: All reportable ingredients are listed in the TSCA
Chemical Substance Inventory.

MANUFACTURER:

E.I. DU PONT DE NEMOURS & CO
POLYMER PRODUCTS DEPARTMENT
1007 MARKET STREET
WILMINGTON, DE 19898

TELEPHONE NUMBERS:

MEDICAL EMERGENCY: 800-441-3637
PRODUCT INFORMATION: 800-441-7515
TRANSPORTATION EMERGENCY: 800-441-9300

HAZARDOUS COMPONENTS

SEE COMPONENT PAGE(S) FOR ADDITIONAL INFORMATION.

Material Safety Data Sheet

MSDS: 11817

MSDS: 11819 - CLYSAR SHRINK FILMS

Plant #: 404 Insertco ===== Page 1

HAZARDOUS COMPONENTS:

MATERIAL: No components are hazardous as defined by 29 CFR 1910.1200

SUBSTANCES PRESENT AT A CONCENTRATION OF 0.1% OR MORE CLASSIFIED AS A CARCINOGEN BY IARC, NTP OR OSHA: None are known.

PHYSICAL/CHEMICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

VOLATILE CONTENT %: Negligible

FIRE AND EXPLOSION HAZARD DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

UNUSUAL FIRE, EXPLOSION HAZARDS: The solid polymer can be combusted only with difficulty.

HAZARDOUS COMBUSTION PRODUCTS: Complete combustion gives carbon dioxide and water. Incomplete combustion gives, in addition, carbon monoxide and hydrocarbon oxidation products including organic acids, aldehydes and alcohol.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Use self-contained breathing apparatus to avoid exposure to the products of combustion.

EXTINGUISHING MEDIA: Water, carbon dioxide, foam, dry chemical.

HAZARDOUS REACTIVITY

STABILITY AT ROOM TEMPERATURE: Stable.

POLYMERIZATION: Will not occur.

MATERIALS TO AVOID: None are known.

CONDITIONS TO AVOID: Temperatures above 325 Deg. C (617 deg F).

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and hydrocarbon oxidation products including organic acids, aldehydes and alcohols.

HEALTH HAZARD DATA

Before using Clysar(R) Shrink Films, read the bulletin "Safety in Handling and Use".

ACUTE OR IMMEDIATE EFFECTS:

ROUTES OF ENTRY AND SYMPTOMS:

INGESTION: Ingestion is not a probable route of exposure. Oral toxicity tests have been run on polyethylene which is the major constituent of Clysar(R) Shrink films listed in this MSDS. The tests showed that a polyethylene has low toxicity.

SKIN: Animal tests with polyethylene show no evidence for skin irritation or sensitization. No dermatitis problem is expected from routine handling of polymer. Molten polymer contacting the skin will cause thermal burns.

EYE: Mechanical irritation only.

INHALATION: Clysar(R) shrink films are not respirable at room temperature. Du Pont has run analytical tests on the fumes that are evolved during normal hot wire cutting and shrinking operations. The predominant gases produced are low molecular weight hydrocarbons, carbon dioxide, carbon monoxide, and water. The amount of each gas evolved is low. Du Pont does not believe that the concentrations of any of these gases present a hazardous work environment. Nevertheless, it is our recommendation that ventilation be used for the comfort of the employees. In exceptional circumstances, in gross mis-operation of equipment or while the product is being disposed of, Clysar Shrink Film may be exposed to temperatures above 325 deg C (617 deg F). In this case fumes irritating the eyes, nose and throat may be produced. Exposure to these fumes may result in redness, tearing, and itching of the eyes and soreness in the nose and throat together with coughing.

EMERGENCY FIRST AID:

If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.

Wash skin with soap and plenty of water.

Flush eyes with water. Consult a physician if symptoms persist.

Material Safety Data Sheet

MSDS: 11819

MSDS: 11819 - CLYSAR SHRINK FILMS

Plant #: 404 Inserted

If molten polymer contacts skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical attention for thermal burn.

CHRONIC EFFECTS: None are known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None are known.

PROTECTION INFORMATION

EYE: Safety glasses are recommended as good industrial practice.

SKIN: Gloves and long sleeve shirt recommended when handling hot polymer.

VENTILATION: Area ventilation is usually sufficient. If desired, local ventilation over the hot wire cutter and shrink tunnel can also be used.

RESPIRATOR: Not required if area ventilation is adequate.

DISPOSAL

SPILL, LEAK OR RELEASE: Pick up spilled film to avoid slipping hazard.

WASTE DISPOSAL: Landfill or incinerate in accordance with federal, state, and local regulations.

AQUATIC TOXICITY: No information available. Toxicity is expected to be low based on the polymer's negligible water solubility.

STORAGE CONDITIONS: Store in a cool, dry place away from flammable materials. Keep containers closed to prevent contamination.

SECTION 313 SUPPLIER NOTIFICATION

This product contains no known toxic chemical subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

STATE RIGHT TO KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below.

Material Safety Data Sheet
MSDS: 11819 - CLYSAR SHRINK FILMS
Plant #: 404 Insertco

MSDS: 11819

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SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1% OR MORE: None known.

SUBSTANCES ON THE PENNSYLVANIA SPECIAL HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 0.01% OR MORE: None known.

NONHAZARDOUS INGREDIENTS PRESENT AT A CONCENTRATION OF 3% OR MORE REQUIRED TO BE LISTED BY PENNSYLVANIA: Since this product contains no hazardous substances as defined by the Pennsylvania R-T-K Regulations, a MSDS is not required by law.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: None known.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

SPECIAL NOTES

The information in this Material Safety Data Sheet relates only to the specific material(s) designated herein and does not relate to use in combination with any other material or in any process.

NA = Not applicable


NE = Not established

AEL = Du Pont Company's Acceptable Exposure Limit

< = New or revised information in this section when "<" is in right margin

End of MSDS

Material Safety Data Sheet

HMIS (U.S.A.)	HCS Risk Phrases	Protective Clothing								
<table><tr><td></td><td>1</td></tr><tr><td>Health</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr><tr><td>Personal Protection</td><td>B</td></tr></table>		1	Health	0	Reactivity	0	Personal Protection	B	Not controlled under the HCS (United States).	
	1									
Health	0									
Reactivity	0									
Personal Protection	B									

Section I. Chemical Product and Company Identification

Common Name/ Trade Name	Craigstik 3991PI	Code	3991PI:MS
Supplier	Craig Adhesives & Coatings Co. 80 Wheeler Point Rd. Newark, NJ 07105 (973) 344-1483	In case of Emergency	Craig: (973) 344-1483 Chemtec: (800) 424-9300
Synonym	Repositionable Adhesive		
Chemical Name	Water Based Adhesive		
Chemical Family	Synthetic Polymer Dispersion		
Chemical Formula	Proprietary		
Manufacturer	Craig Adhesives & Coatings Co. 80 Wheeler Point Rd. Newark, NJ 07105 (973) 344-1483	Material Uses	Other non-specified industries: See Technical Data Sheet and Application Notes.

Section II. Hazardous Ingredients

Name	CAS #	% by Weight	HLV/PFL	LC ₅₀ /LD ₅₀
No hazardous ingredient.				

Section III. Hazards Identification

Potential Acute Health Effects	Non-sensitizer for skin. Non-permeator by skin. Non-hazardous in case of ingestion.
Potential Chronic Health Effects	Non-corrosive for skin. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin. Non-irritating to the eyes. Non-hazardous in case of ingestion. Non-hazardous in case of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not toxic. The substance is not toxic to blood, kidneys, lungs, the nervous system, liver, . .

Section IV. First Aid Measures

Eye Contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used.
Skin Contact	NO known EFFECT on skin contact, rinse with water for a few minutes.
Hazardous Skin Contact	No additional information.
Inhalation	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.

Continued on Next Page

Hazardous Inhalation	No additional information.
Ingestion	DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion	No additional information.

Section V. Fire and Explosion Data

Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	No additional remark.
Special Remarks on Explosion Hazards	No additional remark.

Section VI. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section VII. Handling and Storage

Precautions	Do not breathe gas, fumes, vapor or spray. Keep away from incompatibles such as acids, alkalis.
Storage	No specific storage is required. Use shelves or cabinets sturdy enough to bear the weight of the chemicals. Be sure that it is not necessary to strain to reach materials, and that shelves are not overloaded.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
Personal Protection	Safety glasses. Lab coat.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Continued on Next Page

Section IX. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Ammoniacal.
pH (1% solution)	Neutral.	Color	White.
Boiling Point	The lowest known value is 100°C (212°F) (9999). Weighted average: 109.26°C (228.7°F)		
Melting Point	May start to solidify at 0°C (32°F) based on data for: 9999.		
Specific Gravity	Weighted average: 1 (Water = 1)		
Vapor Pressure	The highest known value is 17.535 mm of Hg (@ 20°C) (9999). Weighted average: 15.7 mm of Hg (@ 20°C)		
Vapor Density	The highest known value is 2.62 (Air = 1) (001). Weighted average: 0.83 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Evaporation rate	Not available.		
Viscosity	1300 +/- 300 CPS (Brookfield, 20 rpm, #4 spindle, 77°F)		
Water/Oil Dist. Coeff.	Not available.		
Solubility	Easily soluble in cold water.		

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Reactive with acids, alkalis.
Corrosivity	No specific information is available in our database regarding the corrosivity of this product in presence of various materials.
Special Remarks on Reactivity	No additional remark.
Special Remarks on Corrosivity	No additional remark.

Section XI. Toxicological Information

Routes of Entry	None
Toxicity to Animals	LD50: Not available. LC50: Not available
Chronic Effects on Humans	DEVELOPMENTAL TOXICITY: Not toxic. The substance is not toxic to blood, kidneys, lungs, the nervous system, liver, . .
Other Toxic Effects on Humans	Non-sensitizer for skin. Non-permeator by skin. Non-hazardous in case of ingestion.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on other Toxic Effects on Humans	No additional remark.

Continued on Next Page


Section XII. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	No additional remark.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities.
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Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Proper Shipping Name	Not applicable.
DOT Identification Number	Not applicable.
Packing Group	Not applicable.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	

Section XV. Other Regulatory Information and Pictograms**Federal and State Regulations**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: No products were found.

CERCLA hazardous substances: Ammonia;

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 313 toxic chemical notification and release reporting: No products were found.

Massachusetts RTK: Ammonium hydroxide

Pennsylvania RTK: Ammonium hydroxide

Florida: No products were found.

Minnesota: No products were found.

New Jersey: Ammonium hydroxide

Other Classifications	WHMIS (Canada)	WHMIS CLASS D-2A: Material causing other toxic effects (VERY TOXIC)
	DSCL (EEC)	Not controlled under DSCL (Europe).

Continued on Next Page

**National Fire Protection
Association (U.S.A.)**
Health

Fire Hazard
Reactivity
Specific hazard
**WHMIS (Canada)
(Pictograms)**

**DSCG (Europe)
(Pictograms)**

**TDG (Canada)
(Pictograms)**

**ADR (Europe)
(Pictograms)**

Section XVI. Other Information
**Other Special
Considerations**

Information on Hazardous Ingredients is listed in Section II. Toxic chemicals at <1.0% and OSHA carcinogens at <0.1% are not specifically identified.

Validated by Craig Adhesives and Coatings Company on 1/31/2003.

Verified by Craig Adhesives and Coatings Company.

Printed 1/12/2004.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



Exifilmplus® - Material Safety Data Sheet

SEE IMPORTANT NOTICE ON BOTTOM OF PAGE 2

Emergency Phone: (941) 727-5788

I - Product Identification		HMIS Rating
Manufacturer's Name and Address Intertape Polymer Group, Packaging Products 3647 Cortez Road W. Suite 102, FL 34210		Health <input type="checkbox"/> Flammability <input type="checkbox"/> Reactivity <input type="checkbox"/>
Identity Exifilmplus® (Shrink Film)		Personal Protection <input type="checkbox"/>

II -- Hazardous Ingredients						
Hazardous Components [Specific Chemical Identity/Common Name(s)]	C.A.S.	OSHA PEL	ACGIH TLV	Other Limits	% (optional)	
No hazardous components present. This product is principally composed of polyethylene.						
D.O.T. Proper Shipping Name:		Not Applicable.				
D.O.T. Hazard Class:						
D.O.T. Identification Number:						

III - Physical Data			
Boiling Point (degrees F):	Not Applicable.	Specific Gravity (H ₂ O = 1):	Approximately 0.9.
Vapor Pressure (mm Hg):	Negligible.	Percent Volatile by Volume (%):	Not Applicable.
Vapor Density (Air = 1):	Not Applicable.	Evaporation Rate (Butyl Acetate = 1):	Not Applicable.
Solubility in Water:	Negligible.	Appearance and Odor:	Clear, Odorless Film.

IV - Fire and Explosion Hazard Data				
Flash Point (Method Used):	Not Applicable.	Flammable Limits N/A	Lower N/A	Upper N/A
Extinguish Media:	Water Spray, Water Fog, CO ₂ , and Dry Chemicals.	WARNING	Flammable Liquid	N/A
			Combustible Liquid	N/A
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus.	Unusual Fire and Explosion Hazards:	May Auto Ignite at Temperatures Above 590°F (310°C).	

V - Reactivity Data		
Stability:	<input type="checkbox"/> Unstable	Conditions to Avoid
	<input checked="" type="checkbox"/> Stable	
Incompatibility (materials to avoid):	None are known.	
Hazardous Decomposition Products:	Include but not limited to carbon dioxide, carbon monoxide and hydrocarbon oxidation products.	
Hazardous Polymerization	<input type="checkbox"/> May Occur	Conditions to Avoid
	<input checked="" type="checkbox"/> Will Not Occur	

VI - Health Hazard Data					
Primary Routes of Entry	<input type="checkbox"/> Inhalation	<input type="checkbox"/> Ingestion	Carcinogen Listed In	<input type="checkbox"/> NTP	<input type="checkbox"/> OSHA
	<input type="checkbox"/> Skin Absorption	<input checked="" type="checkbox"/> Not Hazardous		<input type="checkbox"/> IANO Monograph	<input checked="" type="checkbox"/> Not Listed
Health Hazards:	Acute	None Known.			
	Chronic	None Known.			
Effects of Overexposure:	None known.				
Pre-existing Conditions Aggravated by Exposure:	None known.				
Emergency and First Aid Procedure:	Seek medical assistance for further treatment, observation and support if necessary.				
Eyes contact:	Any material that contacts the eye should be washed out immediately with water. Get medical attention if symptoms persist.				
Skin contact:	If burned by contact with molten material, cool as quickly as possible. Do not peel material from skin. Get medical attention for a thermal burn.				
Inhalation:	If symptomatic, move to fresh air. Get medical attention if symptoms persist.				
Ingestion:	Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.				

VII - Special Protection Information			
Respiratory Protection (Specific Type):	No special requirements		
Protective Gloves:	No Special Requirements.	Eye Protection:	No Special Requirements.
Ventilation To Be Used	<input checked="" type="checkbox"/> Local Exhaust	<input type="checkbox"/> Mechanical (General)	<input type="checkbox"/> Special
	<input type="checkbox"/> Other (Specify)		
Other protective Clothing and Equipment:	No special requirements.		
Hygiene Work Practices:	Normal good hygiene.		

VIII - Spill or Leak Procedures	
Steps to be Taken in Case Material is Released or Spilled:	Promptly clean up film trim and waste using normal good housekeeping practices.
Waste Disposal Method:	By any method as a non-hazardous material in accordance with Federal, State, and Local requirements.

IX - Special Precautions	
Precautions to be Taken in Handling and Storing:	Protect from excessive heat.
Other Precautions:	Some irritating fumes may be evolved during heat fusion.
Date: May 28, 2002	
<p>*Notice: Intertape Polymer Group believes that the information contained on this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.</p>	
NO WARRANTY, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE IS MADE	

MSDS for Intertape® 03-28-02 121



SAFETY DATA SHEET

Fixol-E

1. Identification of the substance / preparation and of the company / undertaking

Use of the Substance/Preparation	Solvent adhesive for polyamide 6 for flat belts, conveyor- and processing-belts, machine tapes
Supplier	Habasil AG Römerstrasse 1 CH-4153 Reinach BL 1 Tel. +41 61 715 15 15 Fax. +41 61 715 15 55 www.habasil.com
24 Hour Emergency Assistance	Infotrac, Inc.: (800) 535-5053 Habasil Belting Inc.: 1-678-288-3600
General SDS Assistance	Habasil Belting Inc.: Tel. 1-678-288-3600; Fax 1-678-288-3651 Toll-free Tel. No.: 800-458-6431
Revision Date	22.06.2011
Replaces version of	03.02.2010

2. Composition / information on ingredients

Chemical characterization Solution of Resorcin and Polyamide 6 in Ethanol

Components		Symbol(s)	R-phrases(s)	CAS	EINECS
resorcinol; 1,3-benzenediol	50% - 75%	Xn,N	R-22-36/38-43-50	108-46-3	203-585-2
Ethanol; Ethyl alcohol	25% - 50%	F	R-11	64-17-5	200-578-6

3. Hazards identification



Flammable. Harmful if swallowed. Very toxic to aquatic organisms. Irritating to eyes and skin.

HMIS RATING:

HEALTH: 2* / FLAMMABILITY: 3 / REACTIVITY: 1

*additional chronic hazards present.



NFPA RATING:
HEALTH: 2 / FLAMMABILITY: 3 / REACTIVITY: 1

4. First aid measures

Inhalation	Move to fresh air. Consult a physician for severe cases.
Skin contact	Wash off with warm water and soap. If skin irritation persists, call a physician.
Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion	Induce vomiting if person is conscious. Rinse mouth, ingest activated charcoal. Consult a physician for severe cases.

5. Fire-fighting measures

Suitable extinguishing media	Use dry chemical, CO ₂ , water spray or alcohol foam.
Extinguishing media which must not be used for safety reasons	None.
Specific hazards	Closed containers may explode due to pressure build-up when subjected to excessive heat or intense fire. During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.
Special protective equipment for firefighters	Standard procedure for chemical fires. In the event of fire, wear self contained breathing apparatus.

6. Accidental release measures

Personal precautions	Remove all sources of ignition. Ensure adequate ventilation. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. Handling and storage



Handling	Use only in well-ventilated areas. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Vapours are heavier than air and may spread along floors. Ingestion, exposure to skin and eyes and inhalation of any generated vapours should be avoided. Wash hands and exposed skin before eating, drinking or smoking and after work.
Storage	Keep tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure limit(s)	In case of good ventilation no personal respiratory protective equipment required.
--------------------------	--

Resorcinol:

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	STEL	20 PPM
USA	ACGIH	TWA	10 PPM
Remarks: check ACGIH TLV			
USA	NIOSH	TWA	10 PPM
		STEL	20 PPM

Engineering measures to reduce exposure	Ensure adequate ventilation, especially in confined areas.
--	--

Personal protection equipment

Respiratory protection	In case of good ventilation no personal respiratory protective equipment required.
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Hand protection	Gloves made of Chloroprene. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.
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Eye protection	Safety glasses with side-shields conforming to EN 166.
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Skin and body protection	Long sleeved clothing.
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9. Physical and chemical properties

Form	Liquid.
Colour	Yellowish.
Odour	Alcoholic.



Physical and chemical properties pH: not applicable (% solution)
Flash point: 14 °C.
Water solubility: soluble
Fat solubility %.
Boiling point/range 80 °C.
Density 1.08 g/ml.
Viscosity 560 mPa.s.
Explosion limits (lower) 3 %.
Explosion limits (upper) 36 %.

10. Stability and reactivity

Stability	Stable up to approximately 78 °C. Above 78 °C, hazardous fumes may be released.
Materials to avoid	None.
Hazardous decomposition products	None under normal use.

11. Toxicological information

Acute toxicity	Resorcin LD50/dermal/rabbit = 3360 mg/kg. LD50/oral/rat = 301 mg/kg. LDLO/oral/human = 29 mg/kg. Ethanol LD50/dermal/rabbit = > 20000 mg/kg. LD50/oral/rat = 6200 mg/kg.
Local effects	Toxic by inhalation, in contact with skin and if swallowed. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Long term toxicity	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

12. Ecological information

Persistence / degradability	No data is available on the product itself.
Bioaccumulation	Does not bioaccumulate.



13. Disposal considerations

Waste from residues / unused products	Should not be released into the environment. Can be incinerated, when in compliance with local regulations. European Waste catalogue code (EWC-code): 08 04 09.
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.

14. Transport information

ADR/RID	Proper shipping name: UN No 1993 Flammable liquid, n.o.s. (resorcinol; Ethanol), 3, III (D/E). ADR/RID-Labels 3. Classification code F1. Risk No. 30. Limited quantity LQ 7: max. 5 litres per inner packing, max. 30 litres in total
IMO	Proper shipping name: UN No 1993 Flammable liquid, n.o.s. (resorcinol; Ethanol), 3, III, Flp. 32°C c.c. Labels 3. Limited quantity LQ 7: max. 5 litres per inner packing, max. 30 litres in total EmS: F-E, S-E.
ICAO	

15. Regulatory information

Symbol(s)	Xn - Harmful. N - Dangerous for the environment.
R-phrases(s)	R10: Flammable. R22: Harmful if swallowed. R43: May cause sensitization by skin contact R50: Very toxic to aquatic organisms. R36/38: Irritating to eyes and skin.
S-phrases(s)	S16: Keep away from sources of ignition - No smoking. S24: Avoid contact with skin. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S56: Dispose of this material and its container to hazardous or special waste collection point.

**Regulatory Information**

The product is classified and labelled in accordance with (national equivalent of EC Directive 1999/45).
VOC (CH) = 36%

USA / Canada

Ethanol:
HMIS RATING
HEALTH: 2*
FLAMMABILITY: 3
REACTIVITY: 1

NFPA RATING
HEALTH: 2
FLAMMABILITY: 3
REACTIVITY: 1
*additional chronic hazards present.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

NOTES: This product is subject to SARA section 313 reporting requirements.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No
NDSL: No

Resorcinol:
HMIS RATING
HEALTH: 2*
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0
*additional chronic hazards present.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes
NDSL: No



16. Other information

Recommended use	Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use.
End use	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification.
Text of R phrases mentioned in Section 2	R11: Highly flammable. R22: Harmful if swallowed. R43: May cause sensitization by skin contact R50: Very toxic to aquatic organisms. R36/38: Irritating to eyes and skin.
Changes to former version	Gray shadowed titles mark changed data
Deletions	Blackened shadowed titles mark deleted data

Adhesivos de doblados
update

MATERIAL SAFETY DATA SHEET

REVISION DATE: 09-20-2005

SUPERSEDES: 09-14-2004

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

H.B. Fuller Company
1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Phone: 651-236-5900

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 802989PM
PRODUCT NUMBER: HL2198X
PRODUCT DESCRIPTION: Hot melt adhesive

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Mineral oil, white	8042-47-5	30 - 50	TWA Mist 5 MG/M3

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Contact with molten product will cause thermal burns.
Vapors/fumes may be irritating at application temperatures.

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 1 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: No irritation hazard in normal industrial use. Exposure to hot material may cause thermal burns.

SKIN: Skin contact at room temperature is not irritating. Contact with product at elevated temperatures can result in thermal burns.

INHALATION: Can cause minor respiratory irritation. Vapors may have an offensive odor that may cause headaches, nausea, and vomiting.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

MATERIAL SAFETY DATA SHEET

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): No organs known to be damaged from exposure to this product.

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: No medical conditions affected by exposure.

SECTION 4: FIRST AID MEASURES

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard. For hot product, immediately flush eyes with plenty of water for at least 20 minutes. Get immediate medical attention.

IF ON SKIN: Wash with soap and water. For hot material, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean gauze and do not attempt to remove the material yourself. Get prompt medical attention. Medical personnel: coat with mineral oil to soften material for removal.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: > 204 C (400 F) Cleveland Closed Cup

AUTOIGNITION TEMPERATURE: Not established

LOWER EXPLOSIVE LIMIT (% in air): Not established

UPPER EXPLOSIVE LIMIT (% in air): Not established

EXTINGUISHING MEDIA: A solid stream of water may scatter molten product. Use water spray, foam, dry chemical or carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material will burn in a fire.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

CLEAN-UP: Allow molten material to solidify before disposal.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity. Avoid breathing vapors/fumes of heated product. Prevent contact with molten product.

Storage: Store in a cool, dry place.

MATERIAL SAFETY DATA SHEET

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Not normally required. Wear chemically resistant gloves to prevent prolonged or repeated contact. When material is heated, wear thermally insulating gloves to protect against thermal burns.

GLOVES: Not normally required. Use nitrile gloves if conditions warrant.

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures. At the application temperature, use of local exhaust over the premelting reservoir is encouraged.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
Mineral oil, white	TWA Mist 5 MG/M3 STEL Mist 10 MG/M3	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

COLOR: Amber Light

ODOR: Neutral

ODOR THRESHOLD: Not established

SPECIFIC GRAVITY: 0.98

SOLIDS (% by weight): Not applicable

pH: Not established

BOILING POINT (deg. C): Not established

FREEZING/MELTING POINT (deg. C): Not established

VAPOR PRESSURE (mm Hg): Not established

VAPOR DENSITY: Not established

EVAPORATION RATE: Not established

OCTANOL/WATER COEFFICIENT: Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITY: Not established

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
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MATERIAL SAFETY DATA SHEET

Mineral oil, white	Not established
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TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Dispose of in an approved landfill. Consult your state, local or provincial authorities and your local waste vendor for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

- U.S. EPA TSCA:** This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
- CANADIAN CEPA DSL:** This product is in compliance with the Canadian Domestic Substance List requirements.
- EUROPEAN EINECS:** This product is in compliance with the European Inventory of Notified and Existing Chemical Substances requirements.
- AUSTRALIA AICS:** This product is in compliance with the Australian Inventory of Chemical Substances requirements.
- JAPAN ENCS:** This product is in compliance with the Japanese Existing and New Chemical Substances requirements.
- KOREAN TCCL:** This product is in compliance with the Korean Existing Chemicals List requirements.
- PHILIPPINES:** This product is in compliance with the Philippine Inventory of Chemicals and Chemical Substances requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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MATERIAL SAFETY DATA SHEET

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

STATE REPORTING

This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

Thank you for requesting an MSDS for this product.

We have reviewed our products, conducted a hazard determination, and prepared MSDSs in compliance with the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS). Our MSDSs also provide information on any toxic chemical subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

If this product, or any component of it, is considered to be hazardous or carcinogenic under the OSHA Hazard Communication Standard or the WHMIS regulations, information is provided in Section 2: COMPOSITION/INFORMATION ON INGREDIENTS or in Section 3: HAZARDS IDENTIFICATION.

PRODUCT DATA

L516/4 ADHESIVE

MAJOR USE

Self-seal envelope and packet adhesive. Also used for attachment of plastic cards to carriers.

CHARACTERISTICS

L516/4 has excellent "self seal" properties. It machines well and is fairly easily removed from machinery when dry. When used as a plastic/credit card attachment adhesive it should be evaluated on individual paper/card stock to ensure separation/'hold down' properties are acceptable.

WARNING

This adhesive is **NOT** compatible with other adhesives and care should be taken to wash out equipment thoroughly before introducing this adhesive to the system or other adhesive after using the L516/4. Do not pour wash-up liquid down the drains but dispose of it in a suitable sealed container.

Application equipment should be stainless steel. Do not use copper or copper alloys as they will discolour and degrade the adhesive.

TYPICAL VISCOSITY

15 poise at 20°C, measured on an R.V. Instrument, Spindle No.3, 20rpm

pH

9-10

SHELF LIFE

Approximately four months when stored in sealed containers at normal ambient temperature. Do not allow to freeze. Always stir before use.

HEALTH & SAFETY

L516/4 is based on natural rubber latex and is stabilised with ammonia. Fumes should not be inhaled.

DO NOT ALLOW smoking in working areas.

If the adhesive comes into contact with the skin then wash with warm soapy water. Do not use hot water. If the adhesive comes into contact with the eyes, or if swallowed, seek medical advice immediately.

Further information including a full material safety data sheet is available from our Technical Department at the address given below.

Date Issued: 18.07.2007

CAUTION

Information given in this data sheet is based upon the work of ourselves and/or others. It is believed to be reliable but user should ensure product meets with his requirements before commercial use.

The Buyer must ensure that the product process and usage to which the adhesives are subjected remain constant and in accordance with advice given by the Seller. Variation in the materials used, time scale and storage and methods of usage of the goods and all operating processes may affect the performance of the goods. Buyers should ensure that any variation of whatsoever kind should be preceded by all necessary testing and evaluation to ensure that the adhesive still meets the needs of the customer.

It is the responsibility of the Buyer to ensure that the performance of the adhesives is continuously evaluated to ensure optimum performance under all foreseeable conditions and that end use testing of the finished product utilising the goods is constantly maintained.

SEALOCK

Scott Close, Waltham Industrial Estate, Andover, Hampshire SP10 5NU, U.K.
Tel: +44 (0) 1264 358185 Fax: +44 (0) 1264 332203 Email: info@sealock.co.uk Website: www.sealock.co.uk



FM 1003



MATERIAL SAFETY DATA SHEET ON SEALOCK ADHESIVE No: L516/4

Sealock UK Safety Data Sheet according to Regulation (EC) No. 1907/2006

DATE ISSUED: 13 February 2008

1) IDENTIFICATION AND COMPANY:

Natural rubber latex based adhesive manufactured by Sealock Ltd, Scott Close, Walworth Industrial Estate, ANDOVER, Hampshire, SP10 5NU, UK.

Tel No: +44 (0) 1264 358185
Emergency Tel No +44 (0) 1264 358185
Fax No: +44 (0) 1264 332203
Email: sales@sealock.co.uk

2) HAZARDOUS IDENTIFICATION:

This adhesive is natural rubber latex based but contains ammonia. The following health hazards have been identified:

- 2.1 Inhalation: Do not inhale. Use only in well ventilated area. DO NOT allow smoking in working area.
- 2.2 Ingestion: This adhesive should not be ingested. If ingestion occurs wash out with copious quantities of cold water and seek medical advice.
- 2.3 Skin contact: Barrier creams and protective clothing should be worn.
- 2.4 Eye contact: Goggles to BS2092 strongly recommended

3) CHEMICAL CONSTITUENTS:

Main constituents: Natural rubber latex
Ammonia

9) PHYSICAL AND CHEMICAL PROPERTIES:

White liquid.
Freezing point 0°C
Boiling Point 100°C
Viscosity Typically 15 poise at 20°C
Flash point None
pH Typically 10

10) STABILITY AND REACTIVITY:

The adhesive is stable unless it comes into contact with copper or copper containing alloys in which case it will gel. The pH must also be kept above 8

11) TOXICOLOGICAL INFORMATION:

This adhesive contains ammonia which is poisonous in large quantities, however the content - less than 5% - ensures that provided normal good housekeeping procedures are followed no undue hazard is present.

12) ECOLOGICAL INFORMATION:

This adhesive must not be allowed to reach drainage systems or water courses.

13) DISPOSAL INFORMATION:

Dispose of in sealed containers in approved bulk disposal units. Advise contractor of contents.

14) TRANSPORT INFORMATION:

Transport in conditions which prevent adhesive being exposed to temperatures above 30°C or below 5°C.

In case of spillage proceed as in 6 above.

15) REGULATORY INFORMATION:

Not applicable.

16) OTHER INFORMATION:

None.

*** Material Safety Data Sheet ***
CAPITAL ADHESIVES & PACKAGING CORPORATION
1260 S. OLD ST. RD. 67
MOORESVILLE, IN 46158
(317) 834-5415

CREATION DATE: 6.20.2002

REVISION DATE: 4.12.2006

1. PRODUCTION IDENTIFICATION

PRODUCT TYPE.....LATEX ADHESIVE
PRODUCT NAME.....L179, L179, L17910, L17920, L17950, L17970 **UD1000**
PRODUCT CODE.....Same as PRODUCT NAME
CHEMICAL FAMILY.....NATURAL RUBBER LATEX
SYNONYM NAME(S).....LATEX

2. HAZARDOUS INGREDIENTS

Chemical	CAS No.	Wt %	Exposure Limits
Ammonium Hydroxide	1336-21-6	<1.0%	25 ppm TWA (ACGIH)

Recommended HMIS Rating: 100B

3. PHYSICAL DATA

PURE MATERIAL OR MIXTURE.....MIXTURE
PHYSICAL FORM.....LIQUID
APPEARANCE/PHYSICAL DESCRIPTION.....LIGHT CREAM OR COLORED LIQUID
.....TYPICAL AMMONIA ODOR.
PH AS IS.....10
BOILING POINT.....of water
FREEZING POINT.....of water
SOLUBILITY IN WATER.....MISCIBLE
SPECIFIC GRAVITY (WATER =1).....0.95
BULK DENSITY.....7.9 lbs/gal
VOLATILES.....40%
EVAPORATION RATE.....of water
VAPOR PRESSURE (mmHg).....not determined
VAPOR DENSITY (Air = 1).....not determined
VOLATILE ORGANIC COMPOUNDS.....Nil

4. FIRE AND EXPLOSIVE DATA

AUTOIGNITION.....UNKNOWN
FLASH POINT.....>250°F
.....METHOD: TAGLIBUE CLOSED
.....TESTER/TAG CLOSED TESTER
UPPER EXPLOSIVE LIMIT (%).....Not Available
LOWER EXPLOSIVE LIMIT (%).....Not Available
EXTINGUISHING MEDIA.....Water or Foam

4. FIRE AND EXPLOSIVE DATA cont'd

SPECIAL FIRE FIGHTING PROCEDURES.....None Known
FIRE & EXPLOSION HAZARDS.....Drums may burst from steam pressure from extreme
.....temperatures
NFPA FLAMMABILITY HAZARD CLASS.....1 =SLIGHT

*** Material Safety Data Sheet ***

5. HEALTH EFFECTS DATA

SHORT TERM EFFECTS OF EXPOSURE

ROUTE OF ENTRY	INHALATION
ACUTE EFFECTS	Ammonia - Irritation of the respiratory tract.
ROUTE OF ENTRY	INGESTION
ACUTE EFFECTS	Coughing
ROUTE OF ENTRY	SKIN CONTACT
ACUTE EFFECTS	NO HAZARD IN NORMAL USE.
ROUTE OF ENTRY	EYE CONTACT
ACUTE EFFECTS	Burning sensation

FIRST AID PROCEDURE

EYE	IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES, LIFTING UPPER AND LOWER LIDS. GET PROMPT MEDICAL ATTENTION.
SKIN CONTACT	Flush from skin with water.

INHALATION	Move to fresh air.
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INGESTION	NONE
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LONG-TERM EFFECTS OF EXPOSURE

EFFECTS OF CHRONIC EXPOSURE	NONE KNOWN
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TARGET ORGANS	NONE KNOWN
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SPECIAL HEALTH EFFECTS

CARCINOGENICITY	NONE
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TOXICOLOGY INFORMATION

NON TOXIC

6. RECOMMENDATIONS FOR PERSONAL PROTECTIVE EQUIPMENT

CONDITIONS UNDER WHICH PPE REQ'D	Normal Work Conditions
EYE PROTECTION REQUIREMENTS	Wear Safety Glasses w/Side Shields.
GLOVE REQUIREMENTS	Not Required
CLOTHING REQUIREMENTS	Not Required
CHANGE/REMOVAL OF CLOTHING	Not Required
WASH REQUIREMENTS	Not Required
RESPIRATOR REQUIREMENTS	Not Required
VENTILATION REQUIREMENTS	Local; General

7. REACTIVITY

STABILITY	Stable
INCOMPATIBILITIES	Acids or metal salts
NFPA REACTIVITY HAZARD CLASS	0=Insignificant
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon Monoxide
	CARBON DIOXIDE
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR

*** Material Safety Data Sheet ***

8. SPILL AND LEAK PROCEDURES

SPILL OR LEAK PROCEDURES.....SPILLS SHOULD BE TAKEN UP WITH SUITABLE
ABSORBENT AND PLACED IN CONTAINERS. SPILL AREA CAN BE WASHED WITH WATER COLLECT WASH
WATER FOR APPROVED DISPOSAL. DO NOT FLUSH TO STORM SEWER OR WATERWAY.

WATER DISPOSAL METHODS.....WASTE DISPOSAL SHOULD BE IN ACCORDANCE
WITH EXISTING FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

9. HANDLING AND STORAGE PRECAUTIONS

STORAGE TEMPERTURE.....40F-90F

HANDLING/STORAGE.....STORE IN CLOSED CONTAINERS, KEEP FROM
FREEZING, KEEP IN VENTILATED AREA, MINIMIZE CONTACT WITH ATMOSPHERIC AIR, AVOID BREATHING
VAPORS, AVOID EATING DRINKING OR SMOKING AROUND OPEN CONTAINERS

10. SHIPPING INFORMATION

DOT SHIPPING NAME.....ADHESIVE N.O.I.
DOT HAZARD CLASS.....NON HAZARDOUS
DOT REPORTABLE QUANTITY.....NOT NOTED

11. OTHER REGULATORY

TSCA.....ALL COMPONENTS ARE ON THE
.....TSCA INVENTORY.

SARA HAZARD NOTIFICATION

This product may contain the following substances at or above reporting threshold:

PROPOSITION 65 STATEMENT.....COMPONENT(S) KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER AND / OR REPRODUCTIVE TOXICITY AND SUBJECT TO WARNING AND DIS-
CHARGE REQUIREMENTS UNDER THE "SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986"
ARE:None

"OUR SERVICE ENGINEERS ARE AVAILABLE TO HELP PURCHASERS OBTAIN BEST RESULTS FROM OUR
PRODUCT, AND RECOMMENDATIONS ARE BASED ON TEST AND INFORMATION BELIEVED TO BE
RELIABLE. HOWEVER, WE HAVE NO CONTROL UNDER WHICH OUR PRODUCTS ARE TRANSPORTED TO,
STORED, HANDLED, OR USED BY PURCHASERS AND, IN ANY EVENT, ALL RECOMMENDATIONS AND SALES ARE
MADE ON CONDITION THAT WE WILL NOT BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM THEIR
USE. NO REPRESENTATIVE OF OUR HAS ANY AUTHORITY TO WAIVE OR CHANGE THIS PROVISION."

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FR-0187-EB version 1.002
07/26/92

MATERIAL SAFETY DATA SHEET

H. B. Fuller Company
1200 Wolters Boulevard
Vadnais Heights, Minnesota 55110

Date: 26 July 1992

Prepared by: Industrial Hygiene
Telephone Number: 612/481-3300

Emergency Medical Telephone Number: 800/228-5635 ext 018

PRODUCT IDENTIFICATION

H. B. Fuller Company Name: FR-0187-EB

Product Class: SYNTHETIC RESIN based product in water

DOT Proper Shipping Name: Not regulated

WARNING STATEMENTS

No specific warnings for normal use conditions.

PRECAUTIONARY MEASURES

Avoid temperature extremes in storage.

EMERGENCY AND FIRST AID PROCEDURES

FIRST AID:

- If in eye: Flush immediately with water for 15 minutes. Consult a physician if irritation persists.
- If on skin: Wash affected area with soap and water. Launder contaminated clothing before reuse.
- If vapors inhaled: Remove subject to fresh air.
- In case of fire: This product is non-flammable in the liquid state. Use water spray, foam, dry chemical or carbon dioxide on dried product.
- Spill or Leak: Contain and remove with inert absorbent. Keep spill out of sewers.

HAZARDOUS INGREDIENTS

Material Name/CAS #	Level In Product	OSHA PEL	ACGIH TLV (1990-1991)
Residual vinyl acetate monomer (108-05-4)	0.5%	10 ppm	10 ppm
Vapor pressure, in mm Hg @ 20 C.	92		
OSHA STEL:	20 ppm		
ACGIH STEL:	20 ppm		

This MSDS is prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200). Unlisted ingredients are not 'Hazardous' per this OSHA Standard and are considered to be trade secrets of the H. B. Fuller Company. Identities of trade secret ingredients will be made available following the procedures specified in the standard.

OCCUPATIONAL CONTROL PROCEDURES

- Eye Protection: Wear safety glasses to reduce the potential for eye contact; chemical safety goggles are appropriate if splashing is likely. Have eye washes available where eye contact can occur.

NA - not applicable
NE - not established

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version 1.001

HAZARDOUS INGREDIENTS

Material Name/CAS #	Level In Product	OSHA PEL	ACGIH TLV (1990-1991)
Residual vinyl acetate monomer (108-05-4)	40.5%	10 ppm	10 ppm
Vapor pressure, in mm Hg @ 20 °C: 92			
OSHA STEL: 20 ppm			
ACGIH STEL: 20 ppm			

This MSDS is prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200). Unlisted ingredients are not 'Hazardous' per this OSHA Standard and are considered to be trade secrets of the H. B. Fuller Company. Identities of trade secret ingredients will be made available following the procedures specified in the standard.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Wear safety glasses to reduce the potential for eye contact; chemical safety goggles are appropriate if splashing is likely. Have eye washes available where eye contact can occur.

Skin Protection: Prevent prolonged or repeated contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.

Respiratory Protection: Not normally required. Use NIOSH/MSHA approved respirator if conditions warrant.

Ventilation: General dilution ventilation.

FIRE PROTECTION

Flash Point/Method: Non-flammable

Appropriate Extinguishers: Non-flammable in liquid state; use water spray, foam, dry chemical or carbon dioxide on dried product.

Special Fire Fighting Procedures: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

Unusual Fire and Explosion Hazards: There is the possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.

REACTIVITY DATA

Stability: Stable

Incompatibility: Not established

Hazardous Decomposition Products: Incomplete combustion can yield low molecular weight hydrocarbons, carbon monoxide, nitrogen compounds, sulfur compounds

Hazardous Polymerization: Will not occur.

EFFECTS OF OVEREXPOSURE

Eyes: Direct eye contact with the product may cause irritation.

NA - not applicable
NE - not established

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PHYSICAL DATA

Physical State: Liquid
Weight per Gallon: 8.8 +/- 0.2 (lb/gal)
Viscosity: 250 +/- 50 cps
% Solids by Weight: 53 +/- 3
pH: 4.5 +/- 1.5
Boiling Range: Greater than 200 F
Soluble in Water: Miscible

SPILL, LEAK & DISPOSAL INFORMATION

Spill or Leak Procedures: Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds or water systems.

Waste Disposal: To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. It does not contain any added raw materials with known levels of TCLP constituents as identified in section 261.24 of the U.S. EPA Hazardous Waste Regulation. Leachate tests have not been performed. State or local hazardous waste regulations may apply if they are different from the federal regulation. Solidify and dispose of in an approved landfill. For additional waste disposal assistance, consult H.B. Fuller Environmental Services at 612/481-1588.

STORAGE

Protect from freezing - product solubility may be affected.

ADDITIONAL INFORMATION

In storage, monomer vapors will migrate from the emulsion and establish an equilibrium between the headspace in the storage container and the liquid emulsion. Levels in excess of acceptable exposures can accumulate in non-vented headspaces above the emulsion. All procedures appropriate for a confined space entry should be completed prior to performing any work in a bulk storage tank.

This product contains trace amounts (less than 0.1%) of formaldehyde. Formaldehyde has been identified as an animal carcinogen. Overexposure to formaldehyde should not occur with normal handling and use.

REGULATORY INFORMATION**TSCA**

All components of this product are registered under the regulations of the Toxic Substances Control Act.

NA - not applicable
NE - not established

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SARA TITLE III

Section 313: This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372:

Chemical Name	Number	Percentage
Vinyl acetate	108-05-4	<0.5

This information must be included in all MSDS that are copied and distributed for this material.

NA - not applicable
NE - not established

PR-3755 PR
Data Printed: 08/07/95

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MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

H.B. Fuller Company
1200 Walters Boulevard
Vadnais Heights, MN 55110
Phone: 612-481-3300
Fax: 612-481-3309

MSDS INFORMATION

Preparation Date: 11/08/94
Supersedes: 12/15/80
Prepared By: Industrial Hygiene
Phone Number: 612-481-4842

Medical Emergency Phone Number: 1-800-228-5635 ext 018
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

Product Name/Number: PR-3755 PR
Product Description (product use): Water based adhesive

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Unlisted ingredients are not 'hazardous' per the OSHA standard and/or are not found on the WHMIS Ingredient disclosure list.

Chemical/CAS Number	Percent	OSHA PEL	ACGIH TLV
Butyl benzyl phthalate (85-68-7)	1-54	Not estab.	Not estab.
LD50: 2339 mg/kg (oral, rat) LC50: No data found			
Residual vinyl acetate monomer (108-05-4)	<0.54	10 ppm	10 ppm
LD50: 2920 mg/kg (oral, rat) LC50: 2828 ppm/4h (rat)			
Vapor pressure, in mm Hg @ 20 C: 92			
OSHA, ACGIH STEL: 20 ppm			

See Section 16 for additional information.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

No specific warnings for normal use conditions.

POTENTIAL HEALTH EFFECTS

Eyes: Eye contact with liquid product may cause irritation.

Skin: Prolonged or repeated contact with liquid product may cause irritation.

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Inhalation: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat and respiratory tract.

Ingestion: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

Chronic: Overexposure to vinyl acetate is not expected to occur during normal handling and use of this product. Vinyl acetate has been shown to cause irritation and cancer in inhalation studies with laboratory animals. Test levels of 600 ppm caused an increase in tumors in the respiratory tract of the best animals. No tumors were observed in the animals exposed at 50 ppm or lower. There is no evidence that vinyl acetate has caused cancer in humans.

REGULATED CARCINOGEN STATUS:

This product does not contain regulated levels of NTP, IARC, ACGIH or OSHA listed carcinogens.

Existing Health Conditions Affected by Exposure: No known effects on other illnesses.

SECTION 4: FIRST AID MEASURES

If in eyes: Flush immediately with water for 15 minutes. Consult a physician if irritation persists.

If on skin: Wash affected area with soap and water. Launder contaminated clothing before reuse.

If vapors inhaled: Remove subject to fresh air.

If ingested: If person can swallow, give one glass of water or milk. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point/Method: Non-flammable

Upper Explosive Limit/Lower Explosive Limit: Not applicable

Autoignition Temperature: Not applicable

Appropriate Extinguishers: Non-flammable in liquid state; use water spray, foam, dry chemical or carbon dioxide on dried product.

Special Fire Fighting Procedures: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

Unusual Fire and Explosion Hazards: There is the possibility of pressure buildup in closed containers when heated. Water

PR-3755 PR

Date Printed: 08/07/95

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Hazardous Combustion Product: Incomplete combustion can yield low molecular weight hydrocarbons, carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds or water systems.

SECTION 7: HANDLING AND STORAGE

HANDLING INFORMATION

Wear appropriate protective equipment when working with this product.

STORAGE INFORMATION

Avoid temperature extremes in storage.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Wear safety glasses to reduce the potential for eye contact; chemical safety goggles are appropriate if splashing is likely. Have eye washes available where eye contact can occur.

Skin Protection: Prevent prolonged or repeated contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.

Respiratory Protection: Not normally required. Use NIOSH/MSHA approved respirator if conditions warrant.

Ventilation: General dilution ventilation.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	WHITE
Odor:	Mild, sweet
Odor Threshold:	Not established
Weight per Gallon:	8.8 lbs.
Specific Gravity:	Not established
% Solids by Weight:	34
pH:	4.6
Boiling Range:	Greater than 200 F (93 C)
Freezing/Melting Point:	Not established
Vapor Pressure:	Not established
Vapor Density:	Not established
Evaporation Rate:	Not established
Water/Oil Partition Coefficient:	Not established

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Date Printed: 08/07/95

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SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable

Incompatibility: Not established

Hazardous Decomposition: Not established

Hazardous Polymerization: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

No data available

SECTION 12: ECOLOGICAL INFORMATION

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

UNITED STATES DEPARTMENT OF TRANSPORTATION (DOT)

DOT Proper Shipping Name: Not regulated

It is our opinion that the information provided here may be used to transport this product in compliance with Canadian Transportation of Dangerous Goods.

SECTION 15: REGULATORY INFORMATION

SARA TITLE III

Section 313: This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 (SARA) and 40 CFR part 372:

Chemical Name	CAS Number	Percent
Vinyl acetate	108-05-4	<0.5%
Butyl benzyl phthalate	85-68-7	1-5%

PR-3755 PR

Date Printed: 08/07/95

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WHMIS IDENTIFICATION/OTHER INTERNATIONAL REGULATIONS

Not regulated

SECTION 16: ADDITIONAL INFORMATION

- In storage, monomer vapors will migrate from the emulsion and establish an equilibrium between the headspace in the storage container and the liquid emulsion. Levels in excess of acceptable exposures can accumulate in non-vented headspaces above the emulsion. All procedures appropriate for a confined space entry should be completed prior to performing any work in a bulk storage tank.

This product contains trace amounts (less than 0.1%) of formaldehyde. Formaldehyde has been identified as an animal carcinogen. Overexposure to formaldehyde should not occur with normal handling and use.

HMIS RATING

Health-1

Flammability-0

Reactivity-0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, express or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility from use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET



Building Bonds that Last

1260 S. Old St. Rd. 67
Mooresville, TN 46158
(317) 834-5415

Creation Date: 8/22/92

Revision Date: 4/27/07

1. Product Identification

PRODUCT TYPE Resin Adhesive
PRODUCT NAME..... R40603, R40603B, R40603P, R40603U
PRODUCT CODE R40603, R40603B, R40603P, R40603U
CHEMICAL FAMILY Emulsion Polymer
SYNONYM NAME(S) Adhesive

2. Hazardous Ingredients

Chemical	CAS No.	Wt %	Exposure Limits
Vinyl Acetate	108-05-4	<0.07%	10ppm TWA (ACGIH)
Formaldehyde	50-00-0	<0.05%	0.75ppm TWA (OSHA)
Acetaldehyde	75-07-0	<0.01%	200ppm TWA (OSHA)
Methanol	67-56-1	<0.02%	200ppm TWA (OSHA)

Recommended HMIS Rating: 100B

3. Physical Data

Pure Material or Mixture Mixture
Physical Form Liquid
Appearance/Physical Description White, Blue, Pink or Fluorescent Liquid,
..... Slight Sweet Odor.
PH as is 5.0
Boiling Point of water
Freezing Point of water
Solubility in Water Miscible
Specific Gravity (Water = 1) 1.06
Bulk Density 8.9 lb/gal
Volatiles 50%
Evaporation Rate of water
Vapor Pressure (mmHg) not determined
Vapor Density (Air = 1) not determined
Volatile Organic Compounds <0.013 lbs/gal
..... <0.15% by weight

4. Fire and Explosive Data

Auto Ignition Unknown
Flash Point >250°F
..... Method: Taglibue Closed
..... Tester/Tag Closed Tester
Upper Explosive Limit (%) 12.5
Lower Explosive Limit (%) 7.5
Extinguishing Media Dry Chemical; Co2

MATERIAL SAFETY DATA SHEET

Special Fire Fighting Procedures.....	Alcohol Foam Self-Contained Breathing Apparatus to Protect against Potentially Toxic and Irritating fumes.
Fire & Explosion Hazards	Negligible Fire Hazard when Exposed to Heat or Flame
NFPA Flammability Hazard Class	1 = Slight

5. Health Effects Data

Short Term Effects of Exposure

Route of Entry	Inhalation
Acute Effects	No Hazard in Normal Use
Route of Entry	Ingestion
Acute Effects	No Hazard in Normal Use.
Route of Entry	Skin Contact
Acute Effects	No Hazard in Normal Use.
Route of Entry	Eye Contact
Acute Effects	No Hazard in Normal Use.

First Aid Procedures

Eyes..... Immediately Flush Eyes with Large Amounts of Water for at least 15 Minutes, Lifting Upper and Lower Lids. Get Prompt Medical Attention.
 * NOTE: Mild Irritant on Eyes.

Skin Contact	None
Inhalation.....	None
Ingestion.....	None

Long -Term Effects of Exposure

Effects of Chronic Exposure	None
Target Organs.....	None

Special Health Effects

Carcinogenicity	None
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Toxicology Information

Non Toxic

6. Recommendations for Personal Protective Equipment

Conditions under Which PPE Req'd	Normal Work Conditions
Eye Protection Requirements	Wear Safety Glasses with Side Shields.
Glove Requirements	Not Required
Clothing Requirements.....	Not Required
Change/Removal of Clothing	Not Required
Wash Requirements.....	Not Required
Respirator Requirements	Not Required
Ventilation Requirements.....	Local; General

7. Reactivity

Stability	Stable
Incompatibilities.....	Water Reactive Materials
NFPA Reactivity Hazard Class	0=Insignificant
Hazardous Decomposition Products.....	Carbon Monoxide, Carbon Dioxide
Hazardous Polymerization.....	Will Not Occur

MATERIAL SAFETY DATA SHEET

8. Spill and Leak Procedures

Spill or Leak Procedures Spills should be Taken up with Suitable Absorbent and Placed in Containers. Spill Area can be washed with Water; Collect Wash Water for Approved Disposal. Do Not Flush to Storm Sewer or Waterway.

Water Disposal Methods Waste Disposal Should be in Accordance with Existing Federal, State and Local Environmental Regulations.

9. Handling and Storage Precautions

Handling/Storage Keep from Freezing, Keep in Ventilated Area to Minimize Contact with Atmospheric Air, Avoid Breathing Vapors, Avoid Eating, Drinking or Smoking Around Open Containers.

10. Shipping Information

DOT Shipping Name Adhesive N.O.I.

DOT Hazard Class Non Hazardous

DOT Reportable Quantity Not Noted

11. Other Regulatory

TSCA ALL Components are on the TSCA Inventory.

SARA HAZARD NOTIFICATION

This product may contain the following substances at or above reporting threshold:

Section 302 Extremely Hazardous Substance(s) None

Section 313 Toxic Chemical(s) None

PROPOSITION 65 STATEMENT - Component(s) Known to the State of California to Cause Cancer and /or Reproductive Toxicity and Subject to Warning and Discharge Requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986" Are: FORMALDEHYDE

"OUR SERVICE ENGINEERS ARE AVAILABLE TO HELP PURCHASERS OBTAIN BEST RESULTS FROM OUR PRODUCT, AND RECOMMENDATIONS ARE BASED ON TEST AND INFORMATION BELIEVED TO BE RELIABLE. HOWEVER, WE HAVE NO CONTROL UNDER WHICH OUR PRODUCTS ARE TRANSPORTED TO, STORED, HANDLED, OR USED BY PURCHASERS AND, IN ANY EVENT, ALL RECOMMENDATIONS AND SALES ARE MADE ON CONDITION THAT WE WILL NOT BE HELD LIABLE FOR ANY DAMAGES RESULTING FROM THEIR USE. NO REPRESENTATIVE OF OUR HAS ANY AUTHORITY TO WAIVE OR CHANGE THIS PROVISION."

MATERIAL SAFETY DATA SHEET

PRODUCT # WB-0525-800

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier name: American Chemical, Inc.
Address: 2201 North 2nd Street
Minneapolis, MN 55411
Phone: (612) 374-1767
Product Name: WB-0525-800
Product description: Ethylene Vinyl Acetate
Chemical Family: Adhesive

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components (Chemical Name/Common Name)	OSHA PEL	ACCIH TLV	CAS. Reg.	% Optional
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No reportable quantities of ingredients are present

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present

HMIS Hazard Code: Health/Flammability/Reactivity/Personal Protection
1 - 0 - 0 - B

Substances listed in the ingredients section are those identified as being present at a concentration of 1 % or greater, or 0.1% if the substance is on the list of potential carcinogens cited in OSHA Hazard Communications Standard

SECTION 3 - PHYSICAL DATA

Boiling Point (Deg. F):	212 Deg. F
Vapor Pressure (mm Hg):	of Water
Vapor Density (air = 1):	of Water
Solubility in Water:	Soluble
Appearance and Odor:	White Syrup, Slight, Sweet odor
Specific Gravity (H2O=):	1.11 - 1.2
Percent Volatile by Volume:	Approx. 46%
Evaporation Rate (water = 1):	of Water

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	None
Extinguishing Media:	For dried adhesive, use water or chemical foam
Special Fire Fighting Procedures:	Apparatus should be worn while fighting chemical fires
Unusual fire and Explosion Hazard:	None

SECTION 5 - HEALTH HAZARD DATA

Threshold Limit Value:	See Section II
Effect of Overexposure:	Vomiting, Skin rash
Eyes:	Slight irritation - may cause minor burns or rash
Skin:	Slight irritation - may cause minor burns or rash
Inhalation:	Essentially non-irritating
Ingestion:	Irritating - may cause slight burns and vomiting
Emergency/First Aid Procedures:	
Eyes:	Rinse with large quantities of water for 20 min. while holding eyelids apart. Never introduce oils or ointments into eyes without medical advice.
Skin:	Remove contaminated clothing. Launder before reuse. Rinse affected area for 20 min. with large quantities of water.

Inhalation:	Should not cause problems, but if they do occur, remove to a well vented area.
Ingestion:	Small ingested amounts are not believed to product adverse health effects. Larger amounts (at least several ounces) should be removed from the stomach by inducing vomiting or aspiration. No adverse health effects are anticipated. Call a physician.
Primary Route of Entry:	Inhalation – Yes Skin – Yes Ingestion – Yes
Carcinogenicity:	NTP – No IARC Monographs – No OSHA Reg. – No

Medical Conditions Generally
Aggravated by Exposure:

None

SECTION 6 – REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	None
Incompatibility (Materials to Avoid):	Do not contact strong acids or oxidizer
Hazardous Decomposition Products:	Carbon monoxide and Carbon dioxide
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	N/A

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps to be taken if material is Spilled or Released:	Contain spill in as small an area as possible. Soak up on neutral floor absorbent and shovel into a drum for disposal.
Waste Disposal Method:	Follow local disposal codes.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (specify type):	None
Ventilation:	Local exhaust – necessary Special – None Mechanical (Gen.) – Necessary Other – None
Protective Gloves:	Rubber or Buna-N
Eye Protection:	Goggles or safety glasses
Other Protective Equipment:	None

SECTION 9 – SPECIAL PRECAUTIONS

Precautions to be taken in Handling and Storing:	For industrial use only. Store in a cool, dry area. Keep container closed. Keep out of reach of children. Do not take internally. Containers when emptied may be hazardous. Use caution; do not reuse.
Other Precautions:	Use proper personal protective equipment.

6/2004

MATERIAL SAFETY DATA SHEET

REVISION DATE: 07-08-2008

SUPERSEDES: 10-11-2005

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

H.B. Fuller Company
1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Phone: 888-423-8553

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 805499PM
PRODUCT NUMBER: WB0571
PRODUCT DESCRIPTION: Natural latex

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Natural rubber	9006-04-6	50 - 70	Not established

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Can cause eye irritation.

Can cause skin irritation. May cause allergic skin reaction. May cause an allergic respiratory reaction.

HMIS RATING: HEALTH -- 1 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause irritation.

SKIN: Can cause skin irritation. May cause sensitization.

INHALATION: Can cause minor respiratory irritation. May cause allergic respiratory reaction.

INGESTION: Ingestion is not an anticipated route of exposure. Irritating to mouth, throat, and stomach

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): Lungs Skin

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease; Skin disease including eczema and sensitization

MATERIAL SAFETY DATA SHEET

SECTION 4: FIRST AID MEASURES

IF IN EYES: Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: Do not induce vomiting. Seek medical attention immediately. Drink two glasses of water or milk to dilute. Do not give anything by mouth to an unconscious person. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this MSDS.
CLEAN-UP:	Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling:	Mildly irritating material. Avoid unnecessary exposure. This product contains an ingredient that may release formaldehyde at heated cure temperatures.
Storage:	Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:	Wear safety glasses when handling this product.
SKIN PROTECTION:	Avoid skin contact by wearing chemically resistant gloves.
GLOVES:	Nitrile
RESPIRATORY PROTECTION:	Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134)
VENTILATION:	Use local exhaust ventilation or other engineering controls to

MATERIAL SAFETY DATA SHEET

minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AHA WEL
Natural rubber	TWA (as total protein) 0.001MG/M3 Skin absorption may potentially contribute to the overall exposure to this material	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOR:	Tan
ODOR:	Sweet Mild
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	7.95
SPECIFIC GRAVITY:	0.95
SOLIDS (% by weight):	59.5
pH:	10.0
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Natural rubber	Not established

TOXICOLOGY SUMMARY: NIOSH Alert (No. 97-135, June 1997): Workers exposed to latex gloves and other products containing natural rubber latex may develop allergic reactions such as skin rashes; hives; nasal, eye, or sinus symptoms; asthma; and (rarely) shock.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

MATERIAL SAFETY DATA SHEET

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA:

This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL:

The components of this product are included on the DSL or are exempt from DSL requirements.

EUROPEAN EINECS:

All substances contained in this product meet the requirements of the REACH regulation implemented in the European Union.

KOREAN TCCL:

This product is in compliance with the Korean Existing Chemicals List requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.
D2B D2A

STATE REPORTING

This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

REVISION DATE: 10-29-2001

SUPERSEDES: 04-10-2001

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

H.B. Fuller Company
3530 Lexington Avenue N.
St. Paul, MN 55126-8076
Phone: 651-236-5300

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 805499PM
PRODUCT NUMBER: WB0571
PRODUCT DESCRIPTION: Natural latex

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Natural rubber	9006-04-6	50 - 70	Not established

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Can cause eye irritation.
Can cause skin irritation. May cause allergic skin reaction.
May cause an allergic respiratory reaction.

HMIS RATING: HEALTH -- 1 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause irritation.

SKIN: Can cause skin irritation. May cause sensitization.

INHALATION: Can cause minor respiratory irritation. May cause allergic respiratory reaction.

INGESTION: Ingestion is not an anticipated route of exposure. Irritating to mouth, throat, and stomach.

LONG-TERM (CHRONIC) HEALTH EFFECTS

MATERIAL SAFETY DATA SHEET

TARGET ORGAN(S): Lungs, Skin

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease; Skin disease including eczema and sensitization

SECTION 4: FIRST AID MEASURES

IF IN EYES: Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Do not give anything by mouth to an unconscious person. Induce vomiting as a last measure. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:

Non flammable

AUTOIGNITION TEMPERATURE:

Not established

LOWER EXPLOSIVE LIMIT (% in air):

Not established

UPPER EXPLOSIVE LIMIT (% in air):

Not established

EXTINGUISHING MEDIA:

Use water spray, foam, dry chemical or carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

CLEAN-UP:

Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: Mildly irritating material. Avoid unnecessary exposure.

Storage: Store in a cool, dry place.

305499PM

01-22-2002

Page 3 of 5

MATERIAL SAFETY DATA SHEET

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AHA WEL
Natural rubber	Not established	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Tan

ODOR: Mild Sweet

ODOR THRESHOLD: Not established

WEIGHT PER GALLON (lbs.): 7.95

SPECIFIC GRAVITY: 0.95

SOLIDS (% by weight): 59.5

pH: 10.0

BOILING POINT (deg. C): Not established

FREEZING/MELTING POINT (deg. C): Not established

VAPOR PRESSURE (mm Hg): Not established

VAPOR DENSITY: Not established

EVAPORATION RATE: Not established

OCTANOL/WATER COEFFICIENT: Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CHEMICAL INCOMPATIBILITY: Not established

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Natural rubber	Not established

MATERIAL SAFETY DATA SHEET

TOXICOLOGY SUMMARY: NIOSH Alert (No. 97-135, June 1997): Workers exposed to latex gloves and other products containing natural rubber latex may develop allergic reactions such as skin rashes; hives; nasal, eye, or sinus symptoms; asthma; and (rarely) shock.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: This product is in compliance with the Canadian Domestic Substance List requirements.

If you need more information about the inventory status of this product call 651-236-5858.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 72. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2B D2A

STATE REPORTING

This MSDS is not prepared for distribution in California.

MATERIAL SAFETY DATA SHEET

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department
Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

AMERICAN CHEMICAL INC.
2201 NORTH 2ND STREET
MINNEAPOLIS, MN 55411
PH: 612-374-1767
FAX: 612-377-3590
WEBSITE: www.glueit.com

MATERIAL SAFETY DATA SHEET

PRODUCT # WB-40-5057

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier name: American Chemical, Inc.
Address: 2201 North 2nd Street
Minneapolis, MN 55411
Phone: (612) 374-1767
Product Name: WB-40-5057
Product description: Industrial Adhesive
Emergency Number: 800-424-9300

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	CAS#	% by Weight	Exposure Limits
Modified Natural Rubber Latex	Mixture	100	None established

SECTION 3 - HAZARDS IDENTIFICATION

Physical State and Appearance: Off-white liquid
Emergency Overview: Non-flammable off-white liquid. This product does not present significant health hazard when handled using good industrial hygiene and safety practice. Exposure may cause mild irritation of eyes, skin or respiratory tract. May cause gastrointestinal irritation if swallowed

Routes of Exposure: Eyes
Skin
Inhalation
Ingestion

Potential Acute Health Effects:
Eyes: May be slightly irritating on contact with eyes
Skin: May be slightly irritating to the skin on contact
Inhalation: Inhalation of the spray mist may cause slight irritation of respiratory tract.
Ingestion: May be irritating to the digestive tract

Potential Chronic Health Effects:
Carcinogenic Effects: Not available
Mutagenic Effects: Not available
Teratogenic Effects: Not available

SECTION 4 - FIRST AID MEASURES

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water. Get Medical attention if symptoms persist.

Skin Contact: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If swallowed, do not induce vomiting unless directed to do so

by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability of the Product:	Non-Flammable
Auto-ignition Temperature:	Not applicable
Flash Points:	Not applicable
Flammable Limits:	Not applicable
Fire Fighting Media and Instructions:	Aqueous mixture is non-flammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill and Leak:	Absorb with an inert dry material and place in an appropriate waste disposal container.
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SECTION 7 – HANDLING AND STORAGE

Handling:	Wash thoroughly after handling.
Storage:	Keep container tightly closed. Prevent from freezing

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Use process enclosures, local exhaust ventilation, or other engineering controls to prevent exposure to airborne vapors or mists.
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Personal Protection:

Eye:	Safety glasses with side shields.
Body:	Wear overalls or long sleeved shirt and long trousers.
Respiratory:	Wear appropriate respirator when ventilation is inadequate.
Hands:	Gloves, chemical resistant
Feet:	Safety shoes, chemical resistant

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance:	Off-White liquid
Odor:	Ammoniacal
Color:	Off-White
pH:	9 to 11 (basic)
Melting/Freezing Point:	0°C (32°F)
Specific Gravity:	1 (Water=1)
Vapor Pressure:	Not available
Volatility:	Same as water
VOC:	<0.03%
Viscosity:	~350 cP @ 76 F
Solubility:	Easily soluble in cold or hot water
Dispersion Properties:	See solubility in water
Boiling Point:	100°C (212°F)
Physical Chemical comments:	No additional comments

SECTION 10 - STABILITY AND REACTIVITY

Stability and Reactivity:	the product is stable
Conditions of Instability:	Not available
Incompatibility with Various Substances:	Not available
Hazardous Decomposition Products:	Not available
Hazardous Polymerization :	Will not occur

SECTION 11 – TOXI COLOGICAL INFORMATION

Toxicity to Animals:	No data available
Chronic Effects on Humans:	No data available
Other Toxic Effects on Humans:	No specific information is available
Special remarks on Toxicity to Animals:	No additional remark
Special Remarks on Chronic Effects On Humans:	No additional remark

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	No data available
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Toxicity of the Products of Biodegradation: No data available

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Information: Discard in accordance with federal, state and local regulations.
Consult your local or regional authorities

SECTION 14 – TRANSPORT INFORMATION

DOT Classification: Not a DOT regulated material (United States)
Proper shipping Name: Not applicable
UN/NA Identification: Not applicable
Packing group: Not applicable

SECTION 15 – REGULATORY INFORMATION

U.S. Federal Regulations: TSCA 8 (b) inventory: All compounds are listed or exempt from listing.
SARA 302/304/311/312 extremely hazardous substances: No product were found
SARA 302/304 emergency planning and notification: No products were found
SARA 302/304/311/312 hazardous chemicals: No products were found
SARA 311/312 MSDS distribution – chemical inventory – hazard identification: No products were found
SARA 313 toxic chemical notification and release reporting: No products were found
Clean Water Act (CWA) 307 No products were found
Clean Water Act (CWA) 311: No products were found
Clean air act (CAA) 112 accidental release prevention: No products found
Clean air act (CAA) 112 regulated flammable substances: No products were found
Clean air act (CAA) 112 regulated toxic substances: No products were found
State Regulations: No products were found
California prop. 65: No products were found
International Lists: No additional information

SECTION 16 – OTHER INFORMATION

Hazardous Material Information System: Health – 1 Fire Hazard – 0 Reactivity – 0

7/2004

JAN. 20. 2005 4:23PM

NO. 575 P. 4/12

Technische Information
Technical InformationHenkel

Number 51-3053T

Description Adhesin

Información Técnica
Information Technique

Type of Adhesive: Aqueous
Field of Application: Packaging > General Purpose
Typical Technical Data:

Viscosity:	800 cps. @76°F Brookfield RVT, #2/20
pH:	5.0
Color:	White
Solids:	54%

Properties:

51-3053T is a multipurpose adhesive utilized for case and carton sealing, bag converting, glue lap and other paper to paper laminating applications. This product exhibits a good balance of wet tack, speed of set and ultimate adhesion. It is approved for most Michelman coatings including 40E, 40H and Normar 70. It runs well on a wide variety of equipment and is formulated for easy clean up. All ingredients in 51-3053T are approved under the Federal Regulation 21 CFR 175.105, which relates to incidental contact of adhesives with food.

Handling and Application:

51-3053T is supplied ready for use. Preferred running temperature is 70-85°F. This adhesive cleans up wet or dry.

Precautions:

Do not mix with other adhesives.

Storage Conditions:

51-3053T has a 90 day shelf life. Rotate stock, using oldest first. Keep container covered when not in use to prevent moisture loss and contamination. Do not freeze.

Henkel Adhesives
1340 Gasket Dr., Elgin, IL 60120

Tel: (847) 488-8200
Fax: (847) 488-6810

Our information and recommendations do not constitute a warranty or representation for which we assume legal responsibility. They are offered solely for your consideration, investigation and verification. All sales, without exception, are made on condition that Henkel Adhesives is not responsible for any incidental consequential or other damages resulting from the use of its products.

DEC.17.2001 1:48PM

NO.701 P.12/22

DATE: 12/08/00

HENKEL ADHESIVES/MW

PAGE 1

24-HOUR EMERGENCY PHONE NO. CHEMTREC, 800/424-9300

MATERIAL SAFETY DATA SHEET

CHEMICAL NAME:
NONE

TRADE NAME: HENKEL# 51-3053H

CHEMICAL FAMILY:
POLYVINYL EMULSIONFORMULA:
MIXTURE

HAZARD CLASS:

U.N. NUMBER:

PACKING GROUP:

***** HAZARDOUS COMPONENTS *****
NONE

***** PHYSICAL PROPERTIES DATA *****

BOILING POINT: APPROXIMATELY 212 F
SPECIFIC GRAVITY: 1.1
VAPOR PRESSURE (mm HG AT 20 DEG C): SAME AS WATER
PERCENT VOLATILE: 44 - 46%
VAPOR DENSITY: SAME AS WATER VAPOR
EVAPORATION RATE: SAME AS WATER
SOLUBILITY IN WATER: DISPERSIBLE WHEN WET
pH: 3.0 - 6.0
APPEARANCE AND ODOR: WHITE LIQUID. POLYVINYL ODOR.

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT & METHOD: NONE
FLAMMABLE LIMITS: N/A
LEL: N/A
UEL: N/A
EXTINGUISHING MEDIA:
DRIED FILM MAY BURN. USE A-B-C EXTINGUISHER.
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE & EXPLOSION HAZARDS: NONE

***** HEALTH HAZARD INFORMATION *****

THRESHOLD LIMIT VALUE: NOT KNOWN
PRIMARY ROUTES OF EXPOSURE: NO ACUTE SYMPTOMS KNOWN OR EXPECTED.
EYE CONTACT:
MAY CAUSE MILD, TEMPORARY IRRITATION IF SPLASHED IN EYES.
SKIN CONTACT:
MAY CAUSE TEMPORARY RASH OR IRRITATION IF LEFT LONG ON SKIN.
INHALATION: NO KNOWN HARMFUL EFFECTS.
INGESTION: NO KNOWN HARMFUL EFFECTS.

DEC.17.2001 1:49PM

NO.701 P.13/22

DATE: 12/08/00

HENKEL ADHESIVES/MW

PAGE 2

~~24 HOUR EMERGENCY PHONE NO: CHEMTREC, 800/424-9300~~

MATERIAL SAFETY DATA SHEET

(HENKEL #: 51-3053H)

CHRONIC EFFECTS OF EXPOSURE:
NO CHRONIC EFFECTS HAVE BEEN REPORTED.

***** FIRST AID *****

EYE FIRST AID: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER.
SKIN FIRST AID: WASH WITH SOAP AND WATER.
INHALATION FIRST AID: REMOVE PATIENT TO FRESH AIR.
INGESTION FIRST AID: NO SPECIFIC TREATMENT. DO NOT INGEST.

***** REACTIVITY DATA *****

STABLE OR UNSTABLE: STABLE
CONDITIONS TO AVOID: MAY COAGULATE IF OVERHEATED OR FROZEN.
INCOMPATIBILITY: BORAX WILL COAGULATE THE PRODUCT.
HAZARDOUS DECOMPOSITION PRODUCTS:
DRIED FILM MAY GIVE OFF CO AND CO2 WHEN BURNED.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.
CONDITIONS TO AVOID: NONE

***** SPILL AND DISPOSAL PROCEDURES *****

SPILL PROCEDURES:
CONTAIN SPILL WITH ABSORBENT MATERIAL. PICK UP AS MUCH AS
POSSIBLE, WASH DOWN REMAINDER WITH WATER.
DISPOSAL PROCEDURES:
SANITARY LANDFILL - - CONSULT LOCAL ORDINANCES.

***** PROTECTIVE EQUIPMENT *****

VENTILATION: USE WITH ADEQUATE VENTILATION.
RESPIRATORY PROTECTION: NOT GENERALLY NEEDED.
PROTECTIVE CLOTHING: RUBBER GLOVES PREVENT SKIN IRRITATION.
EYE PROTECTION:
GOGGLES SUGGESTED WHEN TRANSFERRING ADHESIVES; TO GUARD
AGAINST SPLASHING.

***** SPECIAL PRECAUTIONS *****

HANDLING & STORAGE PRECAUTIONS:
DO NOT MIX WITH OTHER ADHESIVES. KEEP CONTAINERS COVERED TO
PREVENT CONTAMINATION. DO NOT FREEZE.

SPECIAL COMMENTS:

NON-HAZARDOUS INGREDIENTS WITHHELD UNDER PA TRADE SECRET STATUS.

FDA SARA TITLE III HAZARD CLASS:

NOT HAZARDOUS PER 29 CFR1910.1200

DEC.17.2001 1:49PM

NO.701 P.14/22

DATE: 12/08/00

HENKEL ADHESIVES/MW

PAGE 3

24-HOUR EMERGENCY PHONE NO: CHEMTREC, 800/424-9300

MATERIAL SAFETY DATA SHEET

(HENKEL #: 51-3053H)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF EPA SARA TITLE III SECTION 313 (40CFR372):

CHEMICAL
NONE

CAS NUMBER WEIGHT PERCENT

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS CONSIDERED BY THE STATE OF CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65) AS CAUSING CANCER OR REPRODUCTIVE TOXICITY AND FOR WHICH WARNINGS ARE NOW REQUIRED:

CHEMICAL
NONE

CAS NUMBER WEIGHT PERCENT

THE INFORMATION SUPPLIED HEREIN RELATES TO THE PRODUCT NAMED AND IS BASED UPON INFORMATION HENKEL ADHESIVES BELIEVES TO BE ACCURATE. NO WARRANTY, EXPRESS OR IMPLIED, IS INTENDED. THIS INFORMATION IS OFFERED SOLELY FOR YOUR CONSIDERATION AND INTERPRETATION.

PREPARED BY: VINCENT A. LAURIA

DATE: 08/29/96

General
Use
Lubricants
&
Oils

Material Safety Data Sheet

MSDS: 11769

MSDS: 11769 - ELECTRICAL GRADE SILICONE AERO

Plant #: 404 Inertco

Status: Pending

Revised: 11/12/95

Formula: NOT GIVEN

Part Number: NOT GIVEN

Specification: NOT GIVEN

Keyword: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

CRC INDUSTRIES, INC.

885 LOUIS DRIVE

WARMINSTER, PA 18974

Phone: 215-674-4300

Emergency:

Supplier

CRC INDUSTRIES, INC.

885 LOUIS DRIVE

WARMINSTER, PA 18974

Phone: 215-674-4300

Emergency:

Physical/Chemical Characteristics

Boiling Point: EQ 141 F

INITIAL.

Melting Point: NG

Freezing Point: ND

Pour Point: NG

Softening Point: NG

Specific Gravity: EQ 0.6634

Vapor Pressure: ND

Vapor Density: GT 1

GREATER.

Percent Volatiles: EQ 97%

Evaporation Rate: N+

RAPID.

pH: NA

Molecular Weight: NG

Viscosity: NG

Solubility in Water ...: NOT SOLUBLE.

Odor/Appearance/Other Characteristics:

CLEAR WATER-WHITE LIQUID / SOLVENT ODOR / PHYS. DATA: (WITHOUT PROPELLANT).

Fire and Explosion Data

Closed Cup Flash Pt. .: LT 20 F

TCC.

Open Cup Flash Point .: NG

Fire Point: NG

Auto Ignition: NG

Lower Explosion Limit : ND

Upper Explosion Limit : ND

Shipping Regulations

UN/NA Number: NG

DOT Hazard Class: NG

Shipping Label: NOT GIVEN

Shipping Name: NOT GIVEN

Material Safety Data Sheet

MSDS: 11769

MSDS: 11769 - ELECTRICAL GRADE SILICONE AERO

Plant #: 404 Insertco ===== Page 2

Prepared

Preparer's Name & Title: JON BROWN

Preparation Date: 11/12/92

Component(s):

DIMETHYL POLYSILOXANE

OSHA Pel: NA ppm NG mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 2% 5% CAS No.: 63146-27

ISOMEXANES

OSHA Pel: 500 ppm NG mg/m3

ACGIH TLV: 500 ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 55% 65% CAS No.: 107303

N-HEXANE

OSHA Pel: 50 ppm NG mg/m3

ACGIH TLV: 50 ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 5% 10% CAS No.: 110543

PROPANE

OSHA Pel: 1000 ppm NG mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 10% 20% CAS No.: 74986

ISOBUTANE

OSHA Pel: NA ppm NG mg/m3

ACGIH TLV: NA ppm NG mg/m3

STEL: NG ppm NG mg/m3

Percent of Product: BT 10% 20% CAS No.: 75285

Note: OTHER LIMITS: 1000 PPM.

Text Section(s)

PRODUCT IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

PRODUCT NAME: ELECTRICAL GRADE SILICONE AERO

Material Safety Data Sheet

MSDS: 11767

MSDS: 11767 - ELECTRICAL GRADE BILINDOLAC AERO

Plant #: 404 Insulated =====

PRODUCT: 0100

MSDS 02094

MANUFACTURED BY: CRC INDUSTRIES, INC.
885 LOUIS DRIVE
WARMINSTER, PA 15374

PHONE: (215) 674-4300

INGREDIENTS

SEE COMPONENTS PAGE(S) FOR ADDITIONAL INFORMATION.

PHYSICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FIRE AND EXPLOSION DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

EXTINGUISHING MEDIA: CO2, dry chemical, foam

UNUSUAL HAZARDS: Aerosols containers may explode when heated above 120 F.
Vapors generated are extremely flammable.

REACTIVITY AND STABILITY

STABILITY: Stable

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL: Carbon monoxide, carbon dioxide

MATERIALS TO AVOID: Strong oxidizers

PROTECTION INFORMATION

VENTILATION: Maintain vapor concentration below TLV. Use mechanical means if necessary.

RESPIRATORY: Use self-contained breathing apparatus above TLV.

GLOVES: Solvent resistant

EYE & FACE: Safety glasses

OTHER PROTECTIVE EQUIPMENT: Not normally required for aerosol product usage.

HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation, Skin

SIGNS AND SYMPTOMS OF EXPOSURE:

ACUTE OVEREXPOSURE:

EYES: Burning and irritation.

SKIN: Mild irritation.

INHALATION: Irritation of respiratory tract, dizziness, headaches, central nervous system depression.

CHRONIC OVEREXPOSURE: Repeated overexposures may cause harm to the nervous system.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing lung disorders.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM: No

IARC MONOGRAPHS: No

OSHA: No

EMERGENCY AND FIRST AID PROCEDURES: (If symptoms persist, call a physician).

INHALATION: Remove to fresh air. Apply artificial respiration if necessary.

EYES: Flush with large amounts of water for 15 minutes.

SKIN: Wash exposed area with soap and water. Remove contaminated clothing.

INGESTION: Do Not induce vomiting. Call a physician.

SPILL OR LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry area.

STEPS TO BE TAKEN IN CASE MATERIALS IS RELEASED OR SPILLED: Remove sources of ignition, ventilate area. Absorb spill with an inert absorbent material.

WASTE DISPOSAL: All used and unused Product should be disposed of in conformance with local, state and federal regulations.

SPECIAL PRECAUTIONS AND USE DIRECTIONS

Aerosol cans may explode when heated above 120 F. Use product in areas with good ventilation. Vapors are heavier than air and will collect in low areas.

NFPA HAZARD RATINGS

NFPA HAZARD RATINGS:

HEALTH: 2
FLAMMABILITY: 4
REACTIVITY: 0

SARA INFORMATION

This product contains NO chemicals that are subject to release reporting under section 313 of SARA Title III.

End of MSDS



LPS LABORATORIES
MSDS
MATERIAL SAFETY DATA SHEET

Section 1 - Product Identification and Use

Manufacturer's Name:
LPS Laboratories

Trade Name:
LPS 2 Industrial-Strength Lubricant

Street Address:
4647 Hugh Howell Road

Chemical Family:
Petroleum Hydrocarbons

City, State, Zip:
Tucker, GA 30085-5052

Part Numbers:
00216, 02128, 00205, 00255
00222, LPS-2, LPS-2G

Telephone Number: 770-934-7800

Emergency Telephone Number: 1-800-424-9300 Chemtrec
Outside U.S.: (703) 527-3887

Hazardous Materials Description and proper shipping name (49 CFR 172.101):
Compound, Boiler, Preserving Liquid NMFC 50093 SUB 2 BRL/BXS CL55
CONSUMER COMMODITY ORM-D

TSCA Inventory:
All of the ingredients are listed on the TSCA inventory.

HMIS Labeling:

Health:	1
Flammability:	2
Reactivity:	0

Section 2 - Hazardous Ingredients / Identity Information

Ingredients	CAS Numbers	%WW	OSHA PEL	ACGIH TLV	OTHER LIMITS
Aliphatic Hydrocarbon	64742-47-8	50-70	N.E.	N.E.	100 PEL**
Petroleum Oil					
(severely hydrotreated) heavy	64742-52-5	10-20	5mg/m3*	5mg/m3*	10 mg/m3* STEL
Carbon dioxide propellant (aerosol only)	124-38-9	2-3	10,000 ppm	5,000 ppm	30,000 ppm STEL
* Oil mist					
**Recommended by Supplier					

Section 3 - Physical / Chemical Characteristics

Boiling point (F°):	350°F	Specific gravity (H2O = 1):	.84
Vapor pressure (mmHg) @100°F :	<2	Percent volatile by volume (%):	70
Vapor density (Air = 1):	4.7	Evaporation rate (n-Butyl Acetate = 1):	.07
Solubility in water:	Nil		
Appearance and odor: Light amber liquid with slight odor.			

Section 4 - Fire and Explosion Hazard

Flash point (method used): 175°F SETA Flash **Flammable limits (of diluent):** LEL 1% UEL 6%
Extinguishing media: Foam, dry chemical, carbon dioxide.
Special fire fighting procedures: Do not use water. Treat as combustible petroleum distillates.
Unusual fire and explosive hazards: Intensive heat created by fire will cause aerosols to burst.

N.E. = Not established
N.A. = Not applicable

Section 5 - Health Hazard Data

Primary route(s) of entry: Inhalation, eyes

Health hazard/effects of over exposure:

Inhalation: Headache, dizziness, nausea and anesthetic effects.

Eyes: Irritation.

Skin: Repeated or prolonged contact may cause drying of skin.

Ingestion: Not a likely route of exposure. Low order of oral toxicity; however minute amount aspirated into lungs during ingestion may cause severe pulmonary injury.

Medical conditions aggravated by exposure: None from normal exposure.

Chemicals listed as potential carcinogen: NTP: No IARC: No OSHA: No

Emergency and first aid procedures:

Inhalation: Move to fresh air. Contact physician.

Eyes: Flush eyes with plenty of water and contact physician.

Skin: Wash with soap and water; apply medicated skin cream.

Ingestion: Contains aliphatic hydrocarbons and petroleum oil. Do not induce vomiting. Contact physician immediately.

Section 6 - Reactivity Data

Stability: Stable **Conditions to avoid:** Avoid sparks or open flames. See handling and storage precautions.

Incompatibility (Materials to avoid): Strong oxidizing agents.

Hazardous decomposition products: Thermal decomposition may yield carbon monoxide.

Hazardous polymerization: Will not occur.

Section 7 - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Ventilate area by opening doors and windows. Remove ignition sources. Remove leaking container and transfer remaining product to another vessel. Prevent product from going into sewers and water sources by diking or impounding. Using appropriate safety equipment, mop up or soak up with absorbent material, such as sand or clay.

Waste disposal methods: Dispose of in accordance with local, state and federal regulations for petroleum distillates.

RCRA Hazardous Waste No.: N.A.

CERCLA Reportable Quantity: None

SARA TITLE III Chemicals: None

Precautions to be taken in handling and storage: Store aerosols below 120°F and above 32°F. Store away from ignition sources and avoid breathing vapors.

Section 8 - Control Measures

Respiratory Protection: None required if good ventilation is maintained. For enclosed areas, use NIOSH approved organic vapor cartridge respirator or self-contained breathing apparatus.

Ventilation: Local exhaust is usually adequate. However, mechanical ventilation should be used when spraying in enclosed areas. Vapor concentration should be minimized as much as possible.

Protective gloves: Use solvent resistant gloves for liquid handling.

Eye protection: For spraying or splashing of solvent, use face shield or goggles.

Other protective equipment: None.

Work/hygiene practices: Wash hands with soap and water after use and/or before breaks, lunch and at the end of work periods. Remove contaminated clothing and launder before reuse.

Section 9 - Preparation Date of MSDS

The foregoing technical information and recommendations are compiled from sources that are believed to be accurate and reliable. However, they are supplied without warranty or guarantee of any kind either expressed or implied. The purchaser is responsible for selecting and determining the suitability of products for purchaser's particular needs and we disclaim any responsibility for improper applications or misuse of our products in any manner whatsoever.

January 31, 2003

Fred Fugitt, Technical Services Chemist

Ed Williams, Manager of Research and Development

LPS Laboratories

Form # 2501

LPS 2 Industrial Strength Lubricant

MATERIAL SAFETY DATA SHEET

IDENTITY (As used on label and list): **MAG1 MULTI-PURPOSE LITHIUM GREASE**

PRODUCT CODE: MG610014, MG610035, MG610020, MG610003, MG61003D, WIW54205, MG610016

NEPA Hazard Identification 0 - Least 1 - Slight 2 - Moderate 3 - High 4 - Extreme

Health: 0

Fire: 1

Reactivity: 0

Section I - General Information

Warren Distribution, Inc.
2849 River Road
Council Bluffs, IA 51501
Information (402) 341-9397

Emergency (402) 677-1331

Chemtrec

(800) 424-9300

Reviewed: 02/22/05

Section II - Composition/Information on Ingredients

COMPONENT NAME	%	CAS	OSHA PEL	ACGIH TLV
Hydrocarbon Mixture	none est			
Naphthenic mineral oil, listed IARC				mist 5mg/m3

NON-HAZARDOUS INGREDIENTS

No IARC, NTP, OSHA and ACGIH listed carcinogens.

Section III - Hazards Identification

EYE CONTACT: Irritating.

SKIN CONTACT: Repeated or prolonged contact can result in drying of the skin.

INHALATION: Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product.

INGESTION: Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

CARCINOGENICITY: OSHA-potentially carcinogenic {Lab studies in which materials similar to some of the oils in this product were applied to animals repeatedly for their lifetimes caused tumors.}

SIGNS AND SYMPTOMS OF OVEREXPOSURE: As above

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

OTHER HEALTH INFORMATION: None

Section IV - First Aid Procedures

EYE CONTACT: Flush with water; see physician.

SKIN CONTACT: Wash with soap and water. If high-pressure, get immediate medical attention.

INHALATION: Remove from contaminated area.

INGESTION: If irritation develops, see physician.

Section V - Fire and Explosion Hazard Data

Flash Point (deg F): 450 **Method Used:** COC

Flammable or Explosive Limits (approximate % by volume in air) LEL: ND UEL: ND

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam

SPECIAL FIRE FIGHTING PROCEDURES: Avoid breathing vapors. Use breathing apparatus in confined areas. Cool exposed containers with waterspray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

Section VI - Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Add absorbent to spill area. Keep petroleum products out of sewers and watercourses by damming or impounding. Advise authorities if product has entered sewers or watercourses.

Section VII - Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not handle or store near heat, flames, sparks, or strong oxidants.

OTHER PRECAUTIONS: Do not weld, heat, or drill on emptied containers.

Section VIII - Exposure Controls/Personal Protection

RESPIRATORY PROTECTION: None normally needed

VENTILATION: General adequate; Use local mechanical to insure TLV's not surpassed (where applicable).

PROTECTIVE GLOVES: Chemically resistant

EYE PROTECTION: Goggles or face shield desirable

OTHER PROTECTIVE EQUIPMENT: None

WORK PRACTICES/ENGINEERING CONTROLS: Keep containers closed when not in use.

PERSONAL HYGIENE: Wash thoroughly after contact. Carcinogenicity hazard can be avoided by practicing good personal hygiene.

Section IX- Physical/Chemical Characteristics

Boiling Point (deg F): ND
Melting Point (deg F): 321
Evaporation Rate (n-butyl Acetate=1): <1

Specific Gravity (H₂O=1): <1
Vapor Density (Air=1): >1

Vapor Pressure (mm Hg): <1
Solubility in Water: Negligible

APPEARANCE AND ODOR: Amber semi-solid gel, mild petroleum odor.

Section X - Reactivity Data

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide, carbon dioxide, unidentified organic compounds

HAZARDOUS POLYMERIZATION: Will not occur

Section XI - Toxicological Information

See Section IV

Section XII - Ecological Information

Section XIII - Disposal Considerations

WASTE DISPOSAL METHOD: Dispose of at appropriate waste facility in accordance with regulations.

Section XIV - Transport Information

NOT A REGULATED ITEM ACCORDING TO DOT.

Section XV - Regulatory Information

SARA SECTION 313: This product does not contain greater than 1.0% (greater than 0.1% for carcinogenic substances) of any chemical substance listed under SARA Section 313.

WHMIS classification for product: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we received from sources outside our company and we believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

ExxonMobil

583021-00 MOBIL HYDRAULIC OIL AW 46
MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL HYDRAULIC OIL AW 46
SUPPLIER: EXXONMOBIL OIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA 22037

24 - Hour Health and Safety Emergency (call collect): 609-737-4411

24 - Hour Transportation Emergency:
CHEMTREC: 800-424-9300 202-483-7616
LUBES AND FUELS: 281-834-3296

Product and Technical Information:
Lubricants and Specialties: 800-662-4525 800-443-9966
Fuels Products: 800-947-9147
MSDS Fax on Demand: 713-613-3661
MSDS Internet Website: <http://www.exxon.com>, <http://www.mobil.com>

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: SEVERE TREAT MIN. OILS & ADDITIVES

GLOBALLY REPORTABLE MSDS INGREDIENTS:

None.

See Section 8 for exposure limits (if applicable).

3. HAZARDS IDENTIFICATION

Under normal conditions of use, this product is not considered hazardous according to regulatory guidelines (See section 15).

EMERGENCY OVERVIEW: Dark Amber Liquid. Note: Pressurized mists may form a flammable mixture. DOT ERG No. : NA

POTENTIAL HEALTH EFFECTS: Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure

may result in eye, skin or respiratory irritation.

For further health effects/toxicological data, see Section 11.

4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.

SKIN CONTACT: Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area.

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

INHALATION: Not expected to be a problem. However, if respiratory irritation, dizziness, nausea, or unconsciousness occurs due to excessive vapor or mist exposure, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or mouth-to-mouth resuscitation.

INGESTION: Not expected to be a problem. Seek medical attention if discomfort occurs. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Note: Pressurized mists may form a flammable mixture.

COMBUSTION PRODUCTS: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

Flash Point C(F): 198(388) (ASTM D-92).

Flammable Limits (approx.% vol.in air) - LEL: 0.9%, UEL: 7.0%

NEPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills/releases as required to appropriate authorities. U.S. Coast Guard and EPA regulations require immediate reporting of spills/releases that could reach any waterway including intermittent dry creeks. Report spill/release to Coast Guard National Response Center toll free number (800)424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as directed in Section 13.

WATER SPILL: Confine the spill immediately with booms. Warn other ships in the vicinity. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. If permitted by regulatory authorities the use of suitable dispersants should be considered where recommended in local oil spill procedures.

ENVIRONMENTAL PRECAUTIONS: Prevent material from entering sewers, water sources or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation.

PERSONAL PRECAUTIONS: See Section 8

7. HANDLING AND STORAGE

HANDLING: High pressure injection under the skin may occur due to the rupture of pressurized lines. Always seek medical attention. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

STORAGE: Keep containers closed when not in use. Do not store in open or unlabelled containers. Store away from strong oxidizing agents and combustible materials. Do not store near heat, sparks, flame or strong oxidants.

SPECIAL PRECAUTIONS: Prevent small spills and leakages to avoid slip hazard.

EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

When mists/aerosols can occur, the following are recommended: 5 mg/m³ (as oil mist) - ACGIH Threshold Limit Value (TLV), 10 mg/m³ (as oil mist) - ACGIH Short Term Exposure Limit (STEL), 5 mg/m³ (as oil mist) - OSHA Permissible Exposure Limit (PEL)

VENTILATION: If mists are generated, use adequate ventilation, local exhaust or enclosures to control below exposure limits.

RESPIRATORY PROTECTION: If mists are generated, and/or when ventilation is not adequate, wear approved respirator.

EYE PROTECTION: If eye contact is likely, safety glasses with side

shields or chemical type goggles should be worn.
SKIN PROTECTION: Not normally required. When splashing or liquid contact can occur frequently, wear oil resistant gloves and/or other protective clothing. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data Sheet for specific details.

APPEARANCE: Liquid
COLOR: Dark Amber
ODOR: Mild
ODOR THRESHOLD-ppm: NE
pH: NA
BOILING POINT C(F): > 316(600)
MELTING POINT C(F): NA
FLASH POINT C(F): 198(388) (ASTM D-92)
FLAMMABILITY (solids): NE
AUTO FLAMMABILITY C(F): NA
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-mmHg 20 C: < 0.1
VAPOR DENSITY: > 2.0
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.875
SOLUBILITY IN WATER: Negligible
PARTITION COEFFICIENT: > 3.5
VISCOSITY AT 40 C, cSt: 46.0
VISCOSITY AT 100 C, cSt: 6.7
POUR POINT C(F): < -18(0)
FREEZING POINT C(F): NE
VOLATILE ORGANIC COMPOUND: NE
DMSO EXTRACT, IP-346 (WT.%): <3, for mineral oil only
NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.
CONDITIONS TO AVOID: Extreme heat and high energy sources of ignition.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Product does not decompose at ambient temperatures.
HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). ---Based on testing of similar products and/or the components.

EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: greater than 6 but 15 or less). ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.

OTHER ACUTE TOXICITY DATA: Although an acute inhalation study was not performed with this product, a variety of mineral and synthetic oils, such as those in this product, have been tested. These samples had virtually no effect other than a nonspecific inflammatory response in the lung to the aerosolized mineral oil. The presence of additives in other tested formulations (in approximately the same amounts as in the present formulation) did not alter the observed effects.

---SUBCHRONIC TOXICOLOGY (SUMMARY)---

No significant adverse effects were found in studies using repeated dermal applications of similar formulations to the skin of laboratory animals for 13 weeks at doses significantly higher than those expected during normal industrial exposure. The animals were evaluated extensively for effects of exposure (hematology, serum chemistry, urinalysis, organ weights, microscopic examination of tissues etc.).

---REPRODUCTIVE TOXICOLOGY (SUMMARY)---

No teratogenic effects would be expected from dermal exposure, based on laboratory developmental toxicity studies of major components in this formulation and/or materials of similar composition.

---CHRONIC TOXICOLOGY (SUMMARY)---

Repeated and/or prolonged exposure may cause irritation to the skin, eyes or respiratory tract. Overexposure to oil mist may result in oil droplet deposition and/or granuloma formation. For mineral base oils: Base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects. These results are confirmed on a continuing basis using various screening methods such as Modified Ames Test, IP-346, and/or other analytical methods. For synthetic base oils: The base oils in this product have been tested in the Ames assay and other tests of mutagenicity with negative results. These base oils are not expected to be carcinogenic with chronic dermal exposures.

---SENSITIZATION (SUMMARY)---

Not expected to be sensitizing based on tests of this product, components, or similar products.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS:

In the absence of specific environmental data for this product, this assessment is based on information for representative products.

ECOTOXICITY: Available ectotoxicity data (LL50 >1000 mg/L) indicates that adverse effects to aquatic organisms are not expected from this product.

MOBILITY: When released into the environment, adsorption to sediment and soil will be the predominant behavior.

PERSISTENCE AND DEGRADABILITY: This product is expected to be inherently biodegradable.

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely due to the very low water solubility of this product, therefore bioavailability to aquatic organisms is minimal.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity. The unused product is not formulated with substances covered by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

STATIC ACCUMULATOR (50 picosiemens or less): YES

15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

EU Labeling: Product is not dangerous as defined by the European Union Dangerous Substances/Preparations Directives. EU labeling not required.

Governmental Inventory Status: All components comply with TSCA, EINICS/ELINCS, AICS, DSL, KOREA, and PHILIPPINES.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:
This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

This product contains no chemicals subject to the supplier notification requirements of SARA (313) toxic release program.

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS *
ZINC (ELEMENTAL ANALYSIS) (<0.05%)	7440-66-6	22
PHOSPHORODITHOIC ACID, O,O-DI	68649-42-3	22
C1-14-ALKYL ESTERS, ZINC SALTS (2:		
1) (ZDDP) (0.43%)		

--- REGULATORY LISTS SEARCHED ---

1=ACGIH ALL	6=IARC 1	11=TSCA 4	16=CA P65 CARC	21=LA RTK
2=ACGIH A1	7=IARC 2A	12=TSCA 5a2	17=CA P65 REPRO	22=MI 293
3=ACGIH A2	8=IARC 2B	13=TSCA 5e	18=CA RTK	23=MN RTK
4=NTP CARC	9=OSHA CARC	14=TSCA 6	19=FL RTK	24=NJ RTK
5=NTP SUS	10=OSHA Z	15=TSCA 12b	20=IL RTK	25=PA RTK
				26=RI RTK

* EPA recently added new chemical substances to its TSCA Section 4 test rules. Please contact the supplier to confirm whether the ingredients in this product currently appear on a TSCA 4 or TSCA 12b list.

Code key:CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

16. OTHER INFORMATION

USE: HYDRAULIC OIL

NOTE: PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES

ARE NOT FORMULATED TO CONTAIN PCBS.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following advice should be considered:

INDUSTRIAL LABEL

Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. First Aid: Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapor, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical assistance. Read and understand the MSDS before using this product.

For Internal Use Only: MHC: 1* 1* 1* 1* 1*, MPPEC: A, TRN: 583021-00,
CMCS97: 971019, REQ: US - MARKETING, SAFE USE: L
EHS Approval Date: 13JUN2003

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Prepared by: ExxonMobil Oil Corporation
Environmental Health and Safety Department, Clinton, USA



Get the most comprehensive
MSDS/HazCom program on the market!

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	MOBIL SHC 634 SYNTHETIC LUBRICANT OIL
National Stock Number	9150PSHC634
CAGE Code	58563
Part Number Indicator	A
MSDS Number	193824
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	IMPERIAL OIL (EXXON MOBIL IS MFG)
Street	111 ST CLAIR AVENUE WEST
City	TORONTO
Country	CA
Zip Code	M5W 1K3
Emergency Phone	519-339-2145
Information Phone	416-968-4441

MSDS Preparer's Information

Date MSDS Prepared/Revised	11JUL02
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Appearance/Odor	DARK ORANGE OIL, PETROLEUM ODOUR
Boiling Point	NA
Vapor Pressure	0.01
Vapor Density	>2
Specific Gravity	0.849
Evaporation Rate	<1
Solubility in Water	INSOLUBLE
Container Type	R
Container Pressure Code	4
Temperature Code	8
Product State Code	U

SECTION IV - Fire and Explosion Hazard Data

Flash Point	210
Flash Point Method	COC
Lower Explosion Limit	0.6
Upper Explosion Limit	7.0
Extinguishing Media	FOAM, DRY CHEMICAL OR WATER SPRAY
Special Fire Fighting Procedures	USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES & TO PROTECT PERSONNEL. SHUT OFF FUEL TO FIRE. SCBA SHOULD BE USED FOR ALL INDOOR FIRES & ANY SIGNIFICANT OUTDOOR FIRES. FOR SMALL OUTDOOR FIRES, WHICH MAY EASILY BE EXTINGUISHED W/ PORTABLE FIRE EXTINGUISHERS, USE AN SCBA MAY NOT BE REQUIRED

SECTION V - Reactivity Data

Stability	YES
Materials to Avoid	STRONG OXIDIZING AGENTS
Hazardous Decomposition Products	VARIOUS METAL OXIDES
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR

SECTION VI - Health Hazard Data

Route of Entry: Skin	U
Route of Entry: Ingestion	U
Route of Entry: Inhalation	U
Health Hazards - Acute and Chronic	{INHALE} IRRITATING TO THE EYES, NOSE, THROAT & LUNGS. AVOID BREATHING VAPORS OR MIST {EYE} SLIGHTLY IRRITATING, BUT WILL NOT INJURE EYE TISSUE {SKIN} LOW TOXICITY. {INGEST} LOW TOXICITY
Emergency/First Aid Procedures	{INHALE} REMOVE TO FRESH AIR. ADMINISTER ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. KEEP AT REST. CALL FOR PROMPT MEDICAL ATTENTION {EYE} FLUSH EYES W/ LARGE AMOUNTS OF WATER. USE SOAP IF AVAILABLE. REMOVE SEVERELY CONTAMINATED CLOTHING & LAUNDRY BEFORE REUSE. {INGEST} DO NOT INDUCE VOMITING. KEEP AT REST. GET PROMPT MED. ATTN

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	LAND: ELIMINATE SOURCE OF IGNITION. PREVENT SPILLS FROM ENTERING SEWERS, WATERCOURSES OR LOW AREAS. CONTAIN SPILLED LIQUID W/ SAND OR EARTH. WATER: REMOVE FROM SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL. ENSURE DISPOSAL IN COMPLIANCE W/ GOVERNMENT REQUIREMENTS
Waste Disposal Method	IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS
Handling and Storage Precautions	KEEP CONTAINERS CLOSED. HANDLE & OPEN CONTAINERS W/ CARE. STORE IN A COOL, WELL VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. IN KEEPING W/ GOOD PERSONAL HYGIENE PRACTICES, WASH HANDS THOROUGHLY AFTER HANDLING MATERIAL. EMPTY CONTAINERS CONTAIN PRODUCT RESIDUE. DO NOT PRESSURIZE, CUT, HEAT
Other Precautions	DO NOT WELD EMPTY CONTAINERS.

DO NOT REUSE EMPTY CONTAINERS
WITHOUT COMMERCIAL CLEANING OR
RECONDITIONING

SECTION VIII - Control Measures

Ventilation

LOCAL EXHAUST RECOMMENDED

SECTION IX - Label Data

Protect Eye	NO
Protect Skin	NO
Protect Respiratory	NO
Chronic Indicator	UNKNOWN
Contact Code	UNKNOWN
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

SECTION X - Transportation Data

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	NO INGREDIENTS LISTED ON MSDS
CAS Number	1005
Percent	0

General Use Cleaning Compounds

- ❖ Glass Cleaners
- ❖ Floor cleaners
- ❖ Sanitizers
- ❖ Janitorial Products

ALKALESS V M A T E R I A L S A F E T Y D A T A S H E E T

Page:

PRODUCT NAME: ALKALESS V
PRODUCT CODE: C002
CHEMICAL NAME: ALCOHOL REPLACEMENT

HMS CODES: H F
2 2

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: PRINTERS' SERVICE
ADDRESS : 26 Blanchard Street
Newark, New Jersey 07105

EMERGENCY PHONE : 1-800-424-9300
INFORMATION PHONE : 1-973-589-7800

LAST REVISION : 08/04/97
DATE REVISED : 04/09/98
PREPARER : ENVIRONMENTAL DEPT.

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
* 2-BUTOXYETHANOL	111-76-2	0.6 mmHg 20 C	90 - 100%

PEL 25 ppm; TLV 25 ppm // LC50 800 ppm/8hr : LD50 1.746 g/kg

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT : 336 F	SPECIFIC GRAVITY (H2O-1): 0.90
VAPOR DENSITY : 4.1 (air = 1)	VAPOR PRESSURE : 0.6 mmHg
DRYING RATE : 0.1(nButyl Acetate-1)	VOC : 7.47 lb/gal
PHOTOREACTIVE : NO	METHOD: EPA #24
VOLATILES : 100%	H2O SOLUBILITY : 100%
PHYSICAL STATE : LIQUID	APPEARANCE : CLEAR BLUE
	ODOR : MODERATE

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT : 140 F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.1
EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, OR DRY POWDER (WATER MAY BE INEFFECTIVE)
SPECIAL FIREFIGHTING PROCEDURES : KEEP CONTAINER COOL. CONTROL COOLING WATER SINCE IT MAY TEND TO SPREAD BURNING MATERIAL.
UNUSUAL FIRE AND EXPLOSION HAZARDS: IF BOILING POINT OF SOLVENT IS REACHED, THE CONTAINER MAY RUPTURE EXPLOSIVELY AND IF IGNITED, GENERATE A FIREBALL.

===== SECTION V - REACTIVITY DATA =====

STABILITY: YES
INCOMPATIBILITY (MATERIALS TO AVOID): YES
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: CARBON DIOXIDE, CARBON MONOXIDE ON IGNITION
HAZARDOUS POLYMERIZATION: NONE

===== SECTION VI - HEALTH HAZARD DATA =====

INDICATIONS OF EXPOSURE:
INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: HEADACHE, DIZZINESS, NAUSEA. VERY HIGH LEVELS OF VAPORS COULD CAUSE UNCONSCIOUSNESS.
SLIGHT IRRITATION OF THE MUCOUS MEMBRANE
EYE CONTACT AND SYMPTOMS OF EXPOSURE: REDNESS OR BURNING SENSATION.
SKIN HEALTH RISKS AND SYMPTOMS OF EXPOSURE: REDNESS, ITCHING, IRRITATION ON OVEREXPOSURE.
INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: SEVERE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.
EMERGENCY AND FIRST AID PROCEDURES
IF IN EYES: FLUSH WITH WATER FOR 15 MIN. LIFT UPPER AND LOWER EYE LIDS. SEE A DOCTOR.
IF ON SKIN: WASH WITH SOAP AND WATER.

M A T E R I A L S A F E T Y D A T A S H E E T

ALKALESS V

Page:

EFFECT OF CHRONIC EXPOSURE: NONE

EFFECT OF ACUTE EXPOSURE: NONE

IN ALL CASES OF EMERGENCY AND FIRST AID, WE STRONGLY RECOMMEND A DOCTOR BE SEEN

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No
 MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: DERMATITIS. MAY AGGRAVATE EXISTING LIVER AND
 KIDNEY AILMENTS.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: VENTILATE AREA. KEEP AWAY FROM
 STRONG OXIDIZERS, HEAT, SPARKS OR OPEN FLAMES. PREVENT SPILL FROM SPREADING BY USING AN INERT MATERIAL, SUCH AS SAND, AS A DAM.
 CLEAN OUT OF ALL WATERWAYS OR WATER DRAINS. DO NOT FLUSH AREA WITH WATER. FOR SMALL SPILLS USE ABSORBENT PADS. FOR LARGE SPILLS,
 CALL A SPILL RESPONSE TEAM. IF REQUIRED, CONTACT STATE/LOCAL AGENCIES.

WASTE DISPOSAL METHOD: PRODUCT SOAKED ABSORBENT SHOULD BE PLACED IN SEALED METAL DRUMS FOR DISPOSAL IN ACCORDANCE
 WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP AWAY FROM STRONG OXIDIZERS, HEAT, SPARKS AND
 OPEN FLAMES. DO NOT CUT OR DRILL INTO AN EMPTY CONTAINER IN ANY WAY THAT MIGHT GENERATE A SPARK. SOLVENT RESIDUE IN THE CONTAINER
 COULD IGNITE AND CAUSE AN EXPLOSION. KEEP CONTAINER TIGHTLY CLOSED AND OUT OF THE WEATHER.

OTHER PRECAUTIONS: WE RECOMMEND THAT CONTAINERS BE EITHER PROFESSIONALLY RECONDITIONED FOR REUSE OR PROPERLY DISPOSED OF
 BY CERTIFIED FIRMS TO HELP REDUCE THE POSSIBILITY OF AN ACCIDENT. DISPOSAL OF CONTAINERS SHOULD BE IN ACCORDANCE WITH APPLICABLE
 LAWS AND REGULATIONS. "EMPTY" DRUMS SHOULD NOT BE GIVEN TO INDIVIDUALS.

===== SECTION VIII - CONTROL MEASURES =====

EXPOSURE CONTROL AND PERSONAL PROTECTION:

RESPIRATORY PROTECTION: IF TLV IS EXCEEDED USE A GAS MASK WITH APPROPRIATE CARTRIDGES, CANNISTER OR SUPPLIED AIR EQUIPMENT.

VENTILATION: IF NORMAL VENTILATION IS INADEQUATE USE ADDITIONAL SYSTEMS, ESPECIALLY LOCAL VENTILATION. IF THE VAPOR LEVEL CAN APPROACH
 LEL - LOWER EXPLOSION LIMIT, USE EXPLOSION PROOF SYSTEMS.

PROTECTIVE GLOVES: USE SOLVENT RESISTANT GLOVES.

EYE PROTECTION: USE SAFETY GLASSES OR GOGGLES.

OTHER PROTECTIVE EQUIPMENT OR CLOTHING: NONE.

WORK/HYGIENIC PRACTICES: WASH SKIN/CLOTHES IF THEY COME IN CONTACT WITH THE PRODUCT. DO NOT WEAR CLOTHING WET WITH
 PRODUCT.

===== SECTION IX - SHIPPING INFORMATION =====

GROUND SHIPMENT.

UN No

: NA 1993

DOT HAZARD CLASSIFICATION: COMBUSTIBLE LIQUID- N.O.S.

===== SECTION X - DISCLAIMER =====

INFORMATION AND RECOMMENDATIONS HEREIN HAVE BEEN COMPILED FROM OUR RECORDS AND OTHER SOURCES BELIEVED TO BE RELIABLE. NO
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Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard 29 CFR 1910 1200

NFPA Fire 3

Health 1

Reactivity 1

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION

Manufacturer's Name, Address The Fuller Brush Company - PO Box 729 - Great Bend KS 67530

Product Name Ammoniated Glass Cleaner

Product Number 9172

Chemical Family Aqueous Blend of ammonia and solvents

Package Size 17 oz

EPA Reg No N/A

Emergency Telephone No 316-792-1711

Preparer Bill Dayton

Date 03/16/00

Signature

SECTION II - HAZARDOUS INGREDIENTS IDENTITY INFORMATION

Hazardous Components	CAS#	OSHA TWA	ACGIH TWA	Percent
Isopropyl Alcohol	67-63-0	400 ppm	400 ppm	<7
Isobutane	75-28-5	1000 ppm	800 ppm	<6
*Propoxy Propoxy Butanol	29911-28-2	N/A	N/A	<2
*Water	7732-18-5	N/A	N/A	<88
*Ammonia	7664-41-7	50 ppm	25 ppm	<1

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

No Physical Hazards <input type="checkbox"/>	Flammable Gas <input type="checkbox"/>	Flammable Liquid/Solid <input type="checkbox"/>	Water Reactive <input type="checkbox"/>
Combustible <input type="checkbox"/>	Flammable Aerosol <input type="checkbox"/>	Pyrophoric <input type="checkbox"/>	Oxidizer <input type="checkbox"/>
Compressed Gas <input checked="" type="checkbox"/>	Explosive <input type="checkbox"/>	Unstable - Reactive <input type="checkbox"/>	Organic Peroxide <input type="checkbox"/>

Boiling Point °F: Compressed Gas Solubility in Water: Complete Evaporation Rate >1
Vapor Pressure 42 psig @ Specific Gravity (water =1) 0.9865 pH 11
Vapor Density 2.0 %Volatiles by Weight 99

Appearance and Odor Colorless, thin liquid/characteristic ammonia odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): Liq 102F (TOC) Flammable Limits LEL: 1.9 UEL: 9.5

Extinguishing Media: CO2, Dry Chemical, Foam, ABC Extinguisher

Special Fire Keep aerosols cooled with water to prevent bursting.

Fighting Procedures

Unusual Fire and Explosion Hazards: COMPRESSED GAS: Temperatures in excess of 130F may cause bursting. Liquid concentrate is flammable. Contents of ruptured cans contribute combustible materials in the event of fire.

SECTION V - REACTIVITY DATA

Stability Unstable ☐ Conditions to Avoid: N/A
Stable ☒

Incompatibility Do not mix with any other materials
(Materials to Avoid)

Hazardous Decomposition Products or Byproducts With extreme heat or fire, releases typical hydrocarbon decomposition by-products.

Hazardous Polymerization May Occur ☐ Will Not Occur ☒
Conditions to Avoid N/A

Comments

*Added to comply with the Pennsylvania Worker Right to Know Act and the New Jersey Worker and Community Right to Know Act.

SECTION VI - HEALTH HAZARD DATA

Route (s) of entry	Inhalation <input checked="" type="checkbox"/>	Skin <input checked="" type="checkbox"/>	Eye <input checked="" type="checkbox"/>	Ingestion <input type="checkbox"/>
No Health Hazard <input type="checkbox"/>	Reproductive toxin <input type="checkbox"/>	Sensitizer <input type="checkbox"/>		
Toxic <input type="checkbox"/>	Irritant <input type="checkbox"/>	Carcinogen <input type="checkbox"/>		
Highly Toxic <input type="checkbox"/>	Corrosive <input type="checkbox"/>	See Target Organs <input checked="" type="checkbox"/>		

TARGET ORGANS				
Lungs <input checked="" type="checkbox"/>	Eyes <input checked="" type="checkbox"/>	Blood <input type="checkbox"/>	Teratogen <input type="checkbox"/>	Mucous Membranes <input checked="" type="checkbox"/>
Heart <input type="checkbox"/>	Skin <input checked="" type="checkbox"/>	Liver <input checked="" type="checkbox"/>	Central Nervous System <input checked="" type="checkbox"/>	Autonomic Nervous System <input type="checkbox"/>
Kidney <input type="checkbox"/>	Prostate <input type="checkbox"/>	Mutagen <input type="checkbox"/>	Cardiovascular System <input type="checkbox"/>	Respiratory System <input checked="" type="checkbox"/>

Carcinogenicity:	None Known <input checked="" type="checkbox"/>	NTP: <input type="checkbox"/>	IARC: <input type="checkbox"/>	OSHA Regulated <input type="checkbox"/>
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Medical Conditions Generally Aggravated by Exposure:
None Known

Signs and Symptoms of Exposure:
May cause redness and irritation of eye or skin. Central nervous system effects include headache or dizziness.

Emergency and First Aid Procedures:
In case of eye or skin contact rinse thoroughly with water for 15 minutes. Call a physician if irritation persists.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
Mop up, rinse with water

Waste Disposal Method:
Do not puncture or incinerate. For single units, wrap in newspaper and dispose in trash container. Dispose of multiple units in accordance with Local, State and Federal Regulations.

Potential EPA Hazardous Waste Code(s): N/A

Steps to be taken in handling and storage:
NFPA "Level 1 Aerosol". Do not spray near heat, spark, or open flame. Store at 40 - 90F. Read and follow label directions. Keep out of reach of children.

SECTION VIII - CONTROL MEASURES

Respiratory Protection(Specify Type):
Optional

Ventilation	Local Exhaust	Special:
	Mechanical	Recommended
Protective Gloves	Optional	Eye Protection
		Recommended

Other Protective Clothing and Equipment:
None Required

SECTION IX - SHIPPING INFORMATION

DOT Proper Shipping Name and Number:
Consumer Commodity ORM-D

NE = Not Established
N/A = Not Applicable



Spartan Chemical Company, Inc.

Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):

DAMP MOP

Product Number: 3016

Product Division:

Janitorial

Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990

Medical Emergency: 1-(888)-314-6171 (24 hours)

Chemical Leak/Spill Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Cleaning compounds, liquid, n.o.s.

NFPA Ratings:	HMIS Ratings:
Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal	Health: 1- Slight Fire: 0 - Minimal Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			NTP, IARC or OSHA Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
Nonylphenol ethoxylate	1-5	9016-45-9	Not Established	Not Established	Not Established	No
Isopropyl alcohol	1-5	67-63-0	980	1225	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point: 212 °F	Vapor Pressure: Not determined
Vapor Density (AIR = 1): Unknown	Solubility in Water: Complete
pH: 7.0-8.0	Specific Gravity (H ₂ O=1): 1.00
Evaporation Rate (but. ace. = 1): <1	Percent Solid by Weight: 4-6
Physical State: Liquid	
Appearance & Odor: Yellow liquid, lemon scent	

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: > 212°F	Method Used: ASTM-D56
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Product does not support combustion. Use extinguishing media appropriate for surrounding fire.	
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.	
Unusual Fire & Explosive Hazards: Combustion products are toxic.	

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value: Not Established	Primary Routes of Entry: Inhalation, Skin Contact, Eyes; Oral
Effects of Overexposure- Causes mild eye irritation: Symptoms may include pain, redness, swelling and tearing	
Conditions to Avoid: May cause skin irritation: Symptoms may include pain and redness.	
May be harmful if swallowed: Symptoms may include nausea, vomiting, pain and diarrhea.	
Inhalation of product mist may cause respiratory irritation: Symptoms may include coughing and difficulty breathing.	
Avoid contact with eyes, skin or clothing. Do not swallow. Avoid breathing product mist. Wash thoroughly after handling.	
Conditions Aggravated by Use: Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.	
Emergency & First Aid Procedures:	
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. Get medical attention.	
Skin: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Wash contaminated clothing before reuse.	
Ingestion: Do not induce vomiting unless told to do so by medical personnel. Drink one or two glasses of water to dilute product. Get medical attention. Do not give anything by mouth to an unconscious person.	
Inhalation: In case of respiratory irritation; move person to fresh air. Get medical attention if irritation persists.	

SECTION VI: REACTIVITY DATA

Stability: Stable	Incompatible Materials: Strong oxidizers
Hazardous Decomposition Products: None known	Hazardous Polymerization: Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:	Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (if permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for recovery or disposal.
Waste Disposal Method:	Assure conformance with federal, state and local regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Not normally required. However if respiratory irritation occurs; the use of a NIOSH approved respirator suitable for the use-conditions and chemicals in Section II should be considered.
Ventilation:	Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type):	Impervious rubber or other waterproof gloves are recommended for frequent or prolonged contact with undiluted product.
Eye Protection(Specify Type):	Splash goggles are recommended when handling undiluted product.
Other Protective Equipment:	See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing:	Keep out of reach of children.
Other Precautions:	California Proposition 65 : WARNING: This product contains trace amounts of a chemical known to the State of California to cause cancer or birth defects or other reproductive harm.

© SCC 11/20/2003

Name: Ronald T. Cook

Title: Manager, Regulatory Affairs

DAMP MOP

Effective Date: 11/20/2003

Supersedes: 09/27/2002

Ref: 29 CFR 1910.1200 (OSHA)

Changes: Update Sections I, III, IV, V, VII, VIII & IX

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained herein. Actual conditions of use and handling are beyond sellers control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State and Local laws and regulations.

MATERIAL DATA SAFETY SHEET

Identity: Eysandine® Concentrate - Product #32-000213 or as included with #32-000203 and #32-000310				
Section I				
Manufacturer: Fencal, Inc.		Emergency Telephone: 1-801-232-1200		MSDS 1080
Address: 825 East Highway 151 Platteville, WI 53888 USA		Information Telephone: 800-543-4642		
		Date Prepared: 01/01/03		
Section II - Hazardous Ingredients/Identify Information				
Hazardous Components (Specific Chemical Identity: Common Name(s))		OSHA PEL	ACGIH TLV	Other limits recommended
DEZALCONILUM CHLORIDE CAS #8001-54-3		NCNE	NCNE	NA
% (optional) 101%				
Section III - Physical/Chemical Characteristics				
Boiling Point: 212°F (100°C)		Specific Gravity (H ₂ O)=1: NOT DETERMINED		
Vapor Pressure (mm Hg): 760		Melting Point: N/A		
Vapor Density (Air = 1): NOT DETERMINED		Evaporation Rate (Butyl Acetate = 1): NOT DETERMINED		
Solubility in Water: 100%				
Appearance and Odor: COLORLESS LIQUID WITH NO DISCERNABLE ODOR				
Section IV - Fire and Explosion Hazard Data				
Flash Point (Method Used): N/A		Flammable Limits:		LEL: N/A UEL: N/A
Extinguishing Media: THIS IS A NONFLAMMABLE AQUEOUS SOLUTION.				
Special Fire Fighting Procedures: N/A				
Unusual Fire and Explosion Hazards: N/A				
Section V - Reactivity Data				
Stability		Conditions to Avoid: THIS PRODUCT IS CONSIDERED NON-REACTIVE AND STABLE UNDER NORMAL CONDITIONS OF STORAGE AND USAGE.		
Unstable: NO Stable: YES				
Incompatibility (Materials to Avoid): NCNE AND AM				
Hazardous Decomposition or Byproducts: NCNE				
Hazardous Polymerization		Conditions to Avoid: NONE		
May Occur: NO Will Not Occur: YES				
Section VI - Health Hazard Data				
Route(s) of Entry: Inhalation?: NO Skin?: NO Ingestion?: YES				
Health Hazards (Acute and Chronic): INGESTION OF VOLUMES IN EXCESS OF 2 LITERS MAY CAUSE GASTRIC IRRITATION				
Carcinogenicity: NTP: NO IARC Monographs?: NO OSHA Regulated?: NO				
Signs and Symptoms of Exposure: N/A				
Medical Conditions Generally Aggravated by Exposure: N/A				
Emergency First Aid Procedures: NOTES TO PHYSICIAN: IN THE UNLIKELY EVENT OF RAPID INGESTION OF LARGE VOLUMES OF THE SOLUTION, INDUCE VOMITING AND OBSERVE THE PATIENT FOR GASTRIC IRRITATION.				
Section VII - Precautions for Safe Handling and Use				
Steps to Be Taken in Case Material is Released or Spilled: FLUSH AREA WITH WATER. THE SOLUTION IS NOT RCRA HAZARDOUS WASTE.				
Waste Disposal Method: N/A				
Precautions to Be Taken in Handling and Storage: DO NOT FREEZE OR EXPOSE TO TEMPERATURES IN EXCESS OF 110°F (43°C) FOR EXTENDED PERIODS.				
Other Precautions: N/A				
Section VIII - Control Measures				
Respiratory Protection: N/A				
Ventilation		Local Exhaust: N/A Mechanical: N/A		Specific: N/A Other: N/A
Protective Gloves: USE OF PROTECTIVE GLOVES SUGGESTED WHEN MIXING THE CONCENTRATE WITH WATER.		Eye Protection: USE OF EYE PROTECTION SUGGESTED WHEN MIXING THE CONCENTRATE WITH WATER.		
Other Protective Clothing: N/A				
Work Hygienic Practices: N/A				

Household Products Database

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Specialized Information Services

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Brand Information

Brand Name: Guardsman AFTA Spot Remover

Form: liquid

Product Category: Home inside >> Furniture >> spot remover
Home inside >> Cleaner >> furniture
Home inside >> Cleaner >> carpet/upholstery

Customer Service No.: 800-253-3957

Date Entered: 1997-05-01

Related Items: [Products with similar usage in this database](#)

Manufacturer

Manufacturer: Guardsman Products, Inc.
Div., Guardsman Chemicals

Address: 4999 36th Street

City: Grand Rapids

State: MI

Zip Code: 49512

Telephone Number: 616-940-2900

Toll Free Number: 800-253-3957

Date Info Verified: 2003-01-01

Related Items: [Products by this manufacturer](#)

Health Effects

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the [Material Safety Data Sheet \(MSDS\)](#) prepared by the manufacturer. The National Library of Medicine does not evaluate information from the product label or the Material Safety Data Sheet.

Warning from Product Label: CAUTION. FLAMMABLE MIXTURE NFDC of A No. 4705. KEEP AWAY FROM HEAT OR FLAME. Contains petroleum distillates. May affect the brain or nervous system causing dizziness, headache or nausea. Causes irritation. Avoid frequent or prolonged skin contact or breathing of vapors. Use adequate ventilation. KEEP OUT OF REACH OF CHILDREN. FIRST AID: If contact occurs, remove contaminated clothing from skin. Flush skin with soap and water. If affected by vapor, get fresh air immediately. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Par Code: 0-41758-04005-4

Acute Health Effects: From MSDS
May cause eye or skin irritation. Inhalation may cause CNS depression, headache, nausea, etc. Ingestion may cause gastrointestinal discomfort, diarrhea, nausea, vomiting. Prolonged or repeated occupational overexposure to solvents may cause permanent brain and nervous system damage. Intentional misuse by deliberate concentration and inhalation of contents may be harmful or fatal.

Medical Conditions Generally Aggravated by Exposure: None listed
Chronic Health Effects: MSDS: See Acute Health Effects.
Carcinogenicity: MSDS does not address the subject of carcinogenicity.
Health Rating: 2
Flammability Rating: 3
Reactivity Rating: 0
HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe;
N = No information provided by manufacturer; * = Chronic Health Hazard
MSDS Date: 2000-08-31

Handling/Disposal

Handling: MSDS: Keep away from excessive heat, sparks, and flame. Store in a clean, dry area. Keep product away from moisture and close containers when not in use. Avoid breathing vapors. Intentional misuse by deliberately concentrating or inhaling vapors may be harmful or fatal. Avoid repeated or prolonged contact with skin. Remove contaminated clothing and launder before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Wash skin thoroughly with soap and water after contact. Keep out of reach of children.
Disposal: MSDS: Small amounts to landfill if local, state and federal regulations permit.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
<u>Xylene (mixed isomers)</u>	001330-20-7	10-25
<u>Ligroin</u>	008032-32-4	10-25
<u>Stoddard solvent</u>	008052-41-3	60-70

Note: Brand names are trademarks of their respective holders.
Information is extracted from Consumer Product Information Database ©2004 by DeLina Associates. All rights reserved.

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Last updated: May 12, 2004



LPS LABORATORIES, INC.
MSDS
MATERIAL SAFETY DATA SHEET

Section 1 • Product Identification and Use

Manufacturer's Name:
LPS Laboratories, Inc.

Street Address:
4647 Hugh Howell Road

City, State, Zip:
Tucker, GA 30085-5052

Telephone Number: 770-934-7800

Emergency Telephone Number:

1-800-424-9300 Chemtrec

Outside U.S. (703) 527-3887

Trade Name:

LPS MR-650 Food Grade Mold Release

Chemical Family:
Blended Compound

Part Numbers:
01716

TSCA Inventory:

All of the ingredients are listed on the TSCA inventory.

Hazardous Materials Description and proper shipping name (49 CFR 172.101):

Compound, Boiler, Preserving Liquid

CONSUMER COMMODITY ORM-D

NMFC 50093 SUB 2 BRL/BXS CL55

HMIS Labeling:

Health: 1

Flammability: 3

Reactivity: 0

Section 2 • Hazardous Ingredients / Identity Information

Ingredients	CAS Numbers	%WW	OSHA PEL	ACGIH TLV	OTHER LIMITS
Isohexane	107-83-5	70-80	500 ppm	500 ppm	1,000 ppm STEL
n-Hexane	110-54-3	1-2	50 ppm	50 ppm	None
Propane/Isobutane	68476-85-7	10-20	1,000 ppm	N.E.	None

Section 3 • Physical / Chemical Characteristics

Boiling point (°F):	141°F	Specific gravity (H₂O = 1):	0.659
Vapor pressure (mmHg) @100°F:	352	Percent volatile by volume (%):	96
Vapor density (Air = 1)	approx. 3.0	Evaporation rate (Ethyl Ether = 1):	<1.0
Solubility in water:	Nil		
Appearance and odor: Clear, colorless liquid with mild odor.			

Section 4 • Fire and Explosion Hazard

Flash point (method used): NE (aerosol) **Flammable limits (of diluent):** LEL N.E. UEL N.E.

Extinguishing media: Foam, dry chemical, carbon dioxide.

Special fire fighting procedure: None.

Unusual fire and explosive hazards: Intensive heat created by fire will cause aerosols to burst.

Section 5 • Health Hazard Data

Primary route(s) of entry: Inhalation, eyes, skin.

Health hazard/effects of over exposure:

Inhalation: Headache, dizziness, nausea, anesthetic effects, and other symptoms of central nervous system depression. May irritate mucosal tissue at high concentrations.

Eyes: Vapor and liquid may cause irritation.

Skin: Repeated or prolonged contact may cause drying and defatting of skin.

Ingestion: Low order of oral toxicity; however, minute amount aspirated into lungs during ingestion may cause severe pulmonary injury. Can also cause irritation of the digestive tract.

N.E. = Not established

N.A. = Not applicable

Section 5 • Health Hazard Data

Medical conditions aggravated by exposure: Pre-existing eye, skin and respiratory disorders may be aggravated.

Chemicals listed as potential carcinogen: NTP: No IARC: No OSHA: No

Emergency and first aid procedures:

Inhalation: Move to fresh air and contact physician. Administer oxygen if breathing is difficult.

Eyes: Flush eyes with plenty of water and contact a physician.

Skin: Wash with soap and water; apply medicated skin cream.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Get medical attention immediately.

Section 6 • Reactivity Data

Stability: Stable

Conditions to avoid:

Open flames, electric arcs and other hot surfaces which may cause thermal decomposition.

Incompatibility (Materials to avoid): Oxygen, Oxidizing agents.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, if burned.

Hazardous polymerization: Will not occur.

Section 7 • Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Ventilate area by opening doors and windows. Remove ignition sources. Remove leaking container and transfer remaining product to another vessel. Prevent product from going into sewers and water sources by diking or impounding. Using appropriate safety equipment, mop up or soak up with absorbent material, such as sand or clay.

Waste disposal methods: Dispose of in accordance with local, state and federal regulations for flammable hydrocarbons.

RCRA Hazardous Waste No.: This material has the RCRA characteristic of ignitability and if discarded in its purchased form, it would have the hazardous waste number D001.

CERCLA Reportable Quantity: 5,000 lbs.

SARA TITLE III Chemicals: Yes. CAS # 110-54-3.

Precautions to be taken in handling and storage: Store aerosols below 120°F and above 32°F. Store away from ignition sources and avoid breathing vapors.

Section 8 • Control Measures

Respiratory Protection: None required if good ventilation is maintained. For enclosed areas, use NIOSH approved organic vapor cartridge respirator or self-contained breathing apparatus.

Ventilation: Local exhaust is usually adequate. However, mechanical ventilation should be used when spraying in enclosed areas. Vapor concentration should be minimized as much as possible.

Protective gloves: Use solvent resistant gloves for liquid handling.

Eye protection: For spraying or splashing of solvent, use face shield or goggles.

Other protective equipment: None.

Work/hygienic practices: Wash hands with soap and water after use and/or before breaks, lunch and at the end of work periods. Remove contaminated clothing and laundry before reuse.

Section 9 • Preparation Date of MSDS

The foregoing technical information and recommendations are compiled from sources that are believed to be accurate and reliable. However, they are supplied without warranty or guarantee of any kind either expressed or implied. The purchaser is responsible for selecting and determining the suitability of products for purchaser's particular needs and we disclaim any responsibility for improper applications or misuse of our products in any manner whatsoever.

December 5, 1996

John Roudebush, Director of Research and Development
LPS Laboratories, Inc.

Form # 2646

MSDS LPS MR-650 Food Grade Mold Release





SAFETY DATA SHEET

LPS Precision Clean Ready-to-Use

Revision 2

Revision Date 28/05/05

Supersedes: 25/10/00

Section 1 – Identification of the Preparation and the Company

Product Name: LPS PRECISION CLEAN READY-TO-USE

Part Numbers: M27800

Product Use: A read-to-use alkaline water-based cleaner designed to remove oil and grimy residues from hard surfaces.

Supplier: Geocel Limited, Western Wood Way, Langage Science Park, Plympton, Plymouth, PL7 5BG United Kingdom

TEL: +44 (0)1752 202060
FAX: +44 (0)1752 334384

Manufacturer: LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA 30085 (U.S.A.)
<http://www.lpslabs.com>

Section 2 – Composition / Information on Ingredients

INGREDIENT NAME	EC No.	CASRN	Classification	Weight Percent
Disodium metasilicate	229-912-9	6834-92-0	[C] R34 [Xi] R37	<1%
Dipropylene glycol monomethyl ether	252-104-2	34590-94-8	[Xi] R36	1-2%

Section 3 – Hazards Identification

Human and Environmental Hazards This preparation is not considered hazardous according to European Union Directives 67/548/EEC and 1999/45/EC.

Section 4 – First Aid Measures

Eyes: Liquid contact will cause irritation. Flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if irritation persists.

Skin: Wash with soap and water. Get medical attention if irritation persists.

Inhalation: If spray mist is inhaled, remove to fresh air. If breathing is difficult, give oxygen and get medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention immediately.



SAFETY DATA SHEET

LPS Precision Clean Ready-to-Use

Revision 2

Revision Date 28/05/05

Supersedes: 25/10/00

Section 5 – Fire Fighting Measures

Flash point : None Extinguishing media : Not applicable
Fire-fighting procedures : No special requirements.

Section 6 – Accidental Release Measures

Precautions to protect environment: Do not allow entry into drains or watercourses. If this occurs inform the local authorities at once.
Spill Cleanup methods: Use an absorbent material, eg sand, to mop up residues. See section 13 'Disposal Considerations'.

Section 7 – Handling and Storage

Handling procedures: Use appropriate personal protective equipment and avoid direct contact with skin
Storage Precautions: Keep in original container at ambient temperatures. Do not allow product to freeze
Keep container closed. Keep out of the reach of children

Section 8 – Exposure Controls / Personal Protection

Component	CASRN	UK LT EXP (8 hrs.)	UK ST EXP (15 min.)	ACGIH TLV	ACGIH STEL
Disodium metasilicate	6834-92-0	Not Established	Not Established	Not Established	Not Established
Dipropylene glycol monomethyl ether	34590-94-8	50 ppm(Sk.)	Not Established	100 ppm	150 ppm

Engineering measures: Normal room ventilation is usually adequate. If necessary, use appropriate local exhaust ventilation to keep exposures below the regulated limits.

Personal protective equipment

Eye protection: Safety glasses with side shields conforming to appropriate regulations. Eye wash fountain and emergency shower facilities are recommended.

Hand protection: Use protective gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves. Take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.

Respiratory protection: Typical use of this product under normal conditions does not require the use of respiratory protection.

Hygiene measures: Do not soak clothing with this product and continue working without immediately changing clothes and washing skin. Do not reuse clothing until it has been laundered. An eyewash fountain should be available in the work area.

Environmental exposure controls: Soak up puddles of product with absorbent material and dispose of according to local regulations.



SAFETY DATA SHEET

LPS Precision Clean Ready-to-Use

Revision 2

Revision Date 28/05/05

Supersedes: 25/10/00

Section 9 – Physical / Chemical Properties

Appearance:	Liquid.	Colour:	Turquoise
Odour/Taste:	Citrus.	Vapour Pressure:	~3 kPa @ (25 °C)
Solubility Description:	100% in water	Evaporation Rate:	1 (H ₂ O=1)
Boiling Point (°C):	100 @ 101 kPa	Flash Point (°C):	None
Specific Gravity (Water=1):	1.01-1.02 @ 20 °C	Flash Point Method:	Tag-Closed Cup.
Vapour Density (air=1):	>1	Auto Ignition Temperature (°C):	none
V.O.C. Content:	12.6 g/L	Partition Coefficient (octanol/water):	> 1.0
Flammable limits (estimated):	LOWER: N.E. UPPER: N.E.	Viscosity:	<3 mm ² /second @ 25°C
pH:	12.5		

Section 10 – Chemical Stability & Reactivity

Chemical Stability:	Product is stable under recommended storage conditions.
Conditions to Avoid:	Temperatures below 0°C.
Incompatibility:	Reactive or incompatible with finely divided metals (such as magnesium "dust").
Hazardous Decomposition:	Will not occur.
Hazardous Polymerization:	Will not occur.

Section 11 – Toxicological Information

A: General Product Information

An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

B: Component Analysis

Ingredients	CASRN	LC-50	LD-50
Disodium metasilicate	6834-92-0	Not established	Oral LD50 Rat: 1153 mg/kg; Oral LD50 Mouse: 770 mg/kg
Dipropylene glycol monomethyl ether	34590-94-8	Not established	Oral LD50 Rat: 5400 µL/kg; Dermal LD50 Rabbit: 10 mL/kg



SAFETY DATA SHEET

LPS Precision Clean Ready-to-Use

Revision 2

Revision Date 28/05/05

Supersedes: 25/10/00

Section 12 – Ecological Information

General Product Information

No ecotoxicity information is available for the product. Keep out of surface waters, sewers, and water supplies.

Component Information Acute Aquatic Toxicity

Component	CASRN	Test	Species	Results
Disodium metasilicate	6834-92-0	48-hour EC ₅₀	Daphnia magna	4857 mg of 35% solution per litre
		96-hour EC ₅₀	Brachydanio rerio	3185 mg of 35% solution per litre at pH 10.1
Dipropylene glycol monomethyl ether	34590-94-8	48-hour EC ₅₀	Daphnia magna	1919 mg/L
		96-hour EC ₅₀	Pimephales promelas	>10,000 mg/L

Section 13 – Disposal Considerations

Disposal: Waste must be disposed of in accordance with national and local environmental control regulations.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate.

Section 14 – Transportation Information

This product is not classified for the purposes of transportation.

Section 15 – Regulatory Information

Labels for Supply: Not classified

Risk Phrases: Not classified

Safety Phrases: Not classified

Section 16 – Other Information

User Notes: The purpose of the above information is to describe this product only in terms of Health and Safety requirements. The information given therefore, should not be construed as guaranteeing specific properties or specification. Customers should satisfy themselves as to the suitability and completeness of this information for their own particular use, bearing in mind any other Health and Safety legislation or regulations. The information and recommendations in this publication are to the best of our knowledge reliable. However, nothing herein is construed as a warranty or representation. Statements concerning the use of the products described herein are not to be construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is to be assumed.

Information Sources: British Aerosol Manufacturers Association Code of Practice,
HSE EH40 Occupation Exposure Limits, Suppliers Safety Data Sheets.



Get the most comprehensive
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Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	LPS PRESOLVE #1420 (BULK)
National Stock Number	6850P001420DR-1
CAGE Code	66724
Part Number Indicator	A
MSDS Number	185817
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	LPS LABORATORIES, INC
Street	4647 HUGH HOWELL ROAD
City	TUCKER
State	GA
Country	US
Zip Code	30085-5052
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	770-934-7800

MSDS Preparer's Information

Street	4647 HUGH HOWELL RD
--------	---------------------

City	TUCKER
State	GA
Zip Code	30085-5052
Date MSDS Prepared/Revised	01JAN93
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Specification Number	N/R
Hazard Storage Compatibility Code	NR
NRC License Number	NR
Net Propellant Weight (Ammo)	NR
Appearance/Odor	CLEAR, COLORLESS LIQUID W/MILD CITRUS ODOR
Boiling Point	350
Melting Point	NR
Vapor Pressure	<5
Vapor Density	4.8 -5.3
Specific Gravity	.803
Decomposition Temperature	NR
Evaporation Rate	<.1
Solubility in Water	SLIGHT
Percent Volatiles by Volume	100
Chemical pH	NR
Corrosion Rate	NR
Container Type	D
Container Pressure Code	1
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method	TCC
Lower Explosion Limit	.7%
Upper Explosion Limit	6.0%
Extinguishing Media	FOAM, DRY CHEMICAL, CO2, DO NOT USE DIRECT STREAM OF WATER
Special Fire Fighting Procedures	SCBA SHOULD BE WORN, WATER FOG BE USED TO COOL CLOSED CONTAINERS
Unusual Fire/Explosion Hazards	INTENSIVE HEAT CREATED BY FIRE WILL CAUSE AEROSOLS TO BURST

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	AVOID SPARKS OR OPEN FLAMES
Materials to Avoid	STRONG OXIDIZING AGENTS
Hazardous Decomposition Products	CARBON MONOXIDE
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR
LD50 - LD50 Mixture	N/R

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	INHALE: HEADACHE, DIZZINESS, NAUSEA, ANESTHETIC EFFECTS SKIN: REPEATED/PROLONGED MAY CAUSE DRYING & DEFATTING INGEST: ASPIRATION INTO LUNGS MAY CAUSE PULMONARY INJURY
Carcinogenicity: NTP	NO
Carcinogenicity: IARC	NO
Carcinogenicity: OSHA	NO
Explanation of Carcinogenicity	NR
Symptoms of Overexposure	INHALATION: HEADACHE, DIZZINESS, NAUSEA AND ANESTHETIC EFFECTS. EYES: IRRITATION. SKIN: REPEATED OR PROLONGED CONTACT MAY CAUSE DRYING AND DEFATTING OF SKIN. INGESTION: LOW ORDER OF ORAL TOXICITY; HOWEVER, MINUTE AMOUNT ASPIRATED INTO LUNGS DURING INGESTI
Medical Cond. Aggravated by Exposure	PRE-EXISTING EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED
Emergency/First Aid Procedures	INHALE: MOVE TO FRESH AIR, ADMINISTER O2 IF BREATHING IS DIFFICULT. EYE: FLUSH EYES W/PLENTY OF WATER, CONTACT A PHYSICIAN SKIN: WASH W/SOAP & WATER; APPLY MEDICATED SKIN CREAM. INGEST: DO NOT INDUCE VOMITING. IF VOMITING OCCURS- KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS. GET MEDICAL ATTN

SECTION VII - Precautions for Safe Handling and Use

Material Safety Data Sheet

MSDS: 11059 - 20100 TELL

Plant #: 401 Insert: 11059 - 20100 TELL

PHYSICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FIRE AND EXPLOSION DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FLAMMABILITY CLASSIFICATION:

OSHA: Class III B

EXTINGUISHING MEDIA: Use foam, CO2, dry chemical, sand.

UNUSUAL FIRE AND EXPLOSION HAZARD: Dense smoke may be generated when burning

SPECIAL FIRE FIGHTING PROCEDURES: Avoid use of water, but if there is no other alternative, implement. Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition when exposed to extreme heat.

HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Sensitive individuals may experience dermatitis after long exposure on skin.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: None known.

PRIMARY ROUTE(S) OF ENTRY: DERMAL

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove from exposure, restore breathing. Call physician.

EYES: Flush with water for 15 minutes. Call physician.

SKIN: Wash with soap and water, remove contaminated clothing.

INGESTION: DO NOT INDUCE VOMITING

Material Safety Data Sheet

MSDS: 11952

MSDS: 11952 - SUPER JELL COMBUND 8124

Plant #: 404 Insertco ***** Page 4

REACTIVITY DATA

PRODUCT STABILITY: Spontaneous Combustion: Not Observed

CONDITIONS TO AVOID: Heat, Sparks, Open Flame, Strong Oxidizing Materials.

HAZARDOUS DECOMPOSITION PRODUCTS: CO and CO₂, SO₂, SO₃.

HAZARDOUS POLYMERIZATION: Will not occur.

SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up - Dispose of wipers in containers approved for oily wastes.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and Local regulations. Rags and waste paper containing this material may heat and burn spontaneously. Store wiping rags containing this material in metal cans with tight lids.

SPECIAL PROTECTION INFORMATION

VENTILATION: General ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: None required normally.

RESPIRATORY PROTECTION: None required in normal usage.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None

SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in sealed containers away from heat, sparks, open flames and oxidizing materials. Fire extinguisher readily available and personnel trained in its proper use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

Material Safety Data Sheet
MSDS: 11359 - SUPER
Plant #: 404 Insert

SPECIAL NOTES

While Superior Printing Ink Company, Inc. believes the data set forth herein are accurate as of the date hereof, Superior Printing Ink Company, Inc. makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

End of MSDS

Material Safety Data Sheet

MSDS: 11959

MSDS: 11959 - SUPER GEL COMPOUND 8124

Plant #: 401 Insert: 5 ===== 11/23/95

Status: Pending

Revised: 01/05/96

Formula: NOT GIVEN

Part Number: NOT GIVEN

Specification: NOT GIVEN

Keyword: NOT GIVEN

Synonyms:

NOT GIVEN

Stock Items: NOT GIVEN

Manufacturer

SUPERIOR PRINTING INK CO., INC.

70 BETHUNE STREET

NEW YORK, NY 10014

Phone: 212-741-0500

Emergency: 212-741-0500

Supplier

SUPERIOR PRINTING INK CO., INC.

70 BETHUNE STREET

NEW YORK, NY 10014

Phone: 212-741-0500

Emergency: 212-741-0500

Physical/Chemical Characteristics

Boiling Point: GT 500 F

Melting Point: NG

Freezing Point: NG

Pour Point: NG

Softening Point: NG

Specific Gravity: LT 1

LIO.DENSITY,LIGHTER.

Vapor Pressure: NG

Vapor Density: GT 1

HEAVIER THAN AIR.

Percent Volatiles: LE 1.0%

BY WT.

Evaporation Rate: LT 1

SLOWER, BUAC=1.

pH: NG

Molecular Weight: NG

Viscosity: NG

Solubility in Water ...: NONE.

Odor/Appearance/Other Characteristics:

CLEAR YELLOW GEL / OLEORESINOUS ODOR.

Fire and Explosion Data

Closed Cup Flash Pt. ..: GT 200 F

PMCC.

Open Cup Flash Point ..: NG

Fire Point: NG

Auto Ignition: NG

Lower Explosion Limit : ND

NO DATA.

Upper Explosion Limit : NG

Shipping Regulations

UN/NA Number : NG

DOT Hazard Class: NOT REGULATED

Shipping Label: NOT GIVEN

Shipping Name: NOT GIVEN

Material Safety Data Sheet

MSDS: 11959 - SUPER JELL COMPOUND FL

Plant #: 404 Inertloc

Page: 11959

Prepared

Preparer: Name & Title: NOT GIVEN

Preparation Date: 5-01-82

Component(s):

SUPER JELL COMPOUND

OSHA PEL: NG ppm NG mg/m³

ACGIH TLV: NG ppm NG mg/m³

STEL: NG ppm NG mg/m³

Percent of Product: NG

CAS NO.: NOT GIVEN

Text Section(s)

PRODUCT IDENTIFICATION

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

TRADE NAME: Super Jell Compound

PRODUCT CLASS: Printing Aid

PRODUCT NUMBER: 8121

HMIS: H 1; F 1; R 0

MANUFACTURER:

SUPERIOR PRINTING INK CO., INC.
70 BETHUNE STREET
NEW YORK, NEW YORK 10014

INFORMATION PHONE: (212) 741-3600

EMERGENCY PHONE: (212) 741-3600

HAZARDOUS COMPONENTS

SEE COMPONENT PAGES FOR ADDITIONAL INFORMATION.

This product is not considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Material Safety Data Sheet

MSDS: 11950 - SUPER TOLL CONTROL GEL

Plant #: 404 Inserted

MSDS: 11950 - SUPER TOLL CONTROL GEL Page 3

PHYSICAL DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FIRE AND EXPLOSION DATA

SEE DATA PAGES FOR ADDITIONAL INFORMATION.

FLAMMABILITY CLASSIFICATION:

OSHA: Class III B

EXTINGUISHING MEDIA: Use foam, CO2, dry chemical, sand.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke may be generated when burning

SPECIAL FIRE FIGHTING PROCEDURES: Avoid use of water, but if there is no other alternative, implement. Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Water spray may be used to cool closed containers to prevent pressure build-up and possible auto-ignition when exposed to extreme heat.

HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Sensitive individuals may experience dermatitis after long exposure on skin.

MEDICAL CONDITION PRONE TO AGGRAVATION BY EXPOSURE: None known.

PRIMARY ROUTE(S) OF ENTRY: DERMAL

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove from exposure, restore breathing. Call physician.

EYES: Flush with water for 15 minutes. Call physician.

SKIN: Wash with soap and water, remove contaminated clothing.

INGESTION: DO NOT INDUCE VOMITING

Material Safety Data Sheet

MSDS# 11959

MSDS: 11959 - SUPER JELL COMPOUND #114

Plant #: 404 Insertco ===== Page 4

REACTIVITY DATA

PRODUCT STABILITY: Spontaneous combustion can occur.

CONDITIONS TO AVOID: Heat, open flame, open flame, strong oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: CO and CO2 and fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

SPILL OR LEAK PROCEDURES

PROCEDURE WHEN MATERIAL SPILLED OR RELEASED: Wipe up - Dispose of rags in containers approved for oily wastes.

WASTE DISPOSAL METHOD: In accordance with Federal, State, and Local regulations. Rags and waste paper containing this material may heat and burn spontaneously. Store wiping rags containing this material in metal cans with tight lids.

SPECIAL PROTECTION INFORMATION

VENTILATION: General ventilation or local exhaust ventilation or as specified by Local or State requirements.

PROTECTIVE GLOVES: None required normally.

RESPIRATORY PROTECTION: None required in normal usage.

EYE PROTECTION: None required in normal usage.

OTHER PROTECTIVE EQUIPMENT: None.

SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in sealed containers away from heat, sparks, open flames and oxidizing materials. Fire extinguisher readily available and personnel trained in its proper use.

OTHER PRECAUTIONS: FOR INDUSTRIAL USE ONLY. DO NOT TAKE INTERNALLY. DO NOT REUSE CONTAINER FOR OTHER PURPOSES.

Material Safety Data Sheet

MSDS: 1195 SUPER DUAL CUR INK

Plant #: 404 Inkside, Kansas City, Missouri

SPECIAL NOTES

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End of MSDS

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200

NFPA Fire 0
Health 1
Reactivity 0

SECTION II - IDENTIFICATION AND MANUFACTURER'S INFORMATION

Manufacturer's Name, Address The Fuller Brush Company - PO Box 729 - Great Bend KS 67530

Product Name: Appearance 2000 Floor Finish
Chemical Family: Aqueous emulsion of polymers.

Product Number: 964
Package Size 1, 5, 55 Gallon

EPA Reg. No: N/A Emergency Telephone No. 316-792-1711
Preparer: Bill Dayton Date: 01/15/01 Signature:

SECTION III - HAZARDOUS INGREDIENTS IDENTIFICATION INFORMATION

Hazardous Components	CAS#	OSHA TWA	ACGIH TWA	Percent
**Diethylene Glycol Methyl Ether	111-77-3	NE	NE	5.0
*Ammonia	7664-4107			
*Polyurethane	9002-88-4			
*Ethylene Copolymer	67892-91-5			
*Styrene Acrylic Polymer	25085-34-1			
*Water	7732-18-5			

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

No Physical Hazards <input checked="" type="checkbox"/>	Flammable Gas <input type="checkbox"/>	Flammable Liquid/Solid <input type="checkbox"/>	Water Reactive <input type="checkbox"/>
Combustible <input type="checkbox"/>	Flammable Aerosol <input type="checkbox"/>	Pyrophoric <input type="checkbox"/>	Oxidizer <input type="checkbox"/>
Compressed Gas <input type="checkbox"/>	Explosive <input type="checkbox"/>	Unstable - Reactive <input type="checkbox"/>	Organic Peroxide <input type="checkbox"/>

Boiling Point, °F 212F Solubility in Water: Dispersible Evaporation Rate 1
Vapor Pressure Unknown Specific Gravity (water =1): 1.032 pH 8.6
Vapor Density N/A %Volatiles by Weight <80

Appearance and Odor: White opaque, thin liquid with characteristic odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method): None Flammable Limits LEL N/A UEL N/A
Extinguishing Media: N/A

Special Fire None
Fighting Procedures.

Unusual Fire and None
Explosion Hazards

SECTION V - REACTIVITY DATA

Stability Unstable ☐ Conditions to Avoid N/A
Stable ☒

Incompatibility: Do not mix with any other material.
(Materials to Avoid)

Hazardous Decomposition None
Products or Byproducts:

Hazardous Polymerization: May Occur: ☐ Will Not Occur: ☒
Conditions to Avoid: N/A

Comments.

*Added to comply with the Pennsylvania Worker Right to Know Act of 1984 & the New Jersey Worker & Community Right to Know Act of 1983.

**This product contains one or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See the Hazardous Components in Section II.

SECTION VI - HEALTH HAZARD DATA

Route (s) of entry:	Inhalation <input checked="" type="checkbox"/>	Skin: <input checked="" type="checkbox"/>	Eye <input checked="" type="checkbox"/>	Ingestion <input checked="" type="checkbox"/>
No Health Hazard <input type="checkbox"/>	Reproductive toxin <input type="checkbox"/>	Sensitizer <input type="checkbox"/>		
Toxic <input type="checkbox"/>	Irritant <input type="checkbox"/>	Carcinogen <input type="checkbox"/>		
Highly Toxic <input type="checkbox"/>	Corrosive <input type="checkbox"/>	See Target Organs <input checked="" type="checkbox"/>		

TARGET ORGANS

Lungs <input type="checkbox"/>	Eyes <input checked="" type="checkbox"/>	Blood <input type="checkbox"/>	Teratogen <input type="checkbox"/>	Mucous Membranes <input checked="" type="checkbox"/>
Heart <input type="checkbox"/>	Skin <input checked="" type="checkbox"/>	Liver <input type="checkbox"/>	Central Nervous System <input type="checkbox"/>	Autonomic Nervous System <input type="checkbox"/>
Kidney <input type="checkbox"/>	Prostate <input type="checkbox"/>	Mutagen <input type="checkbox"/>	Cardiovascular System <input type="checkbox"/>	Respiratory System <input checked="" type="checkbox"/>

Carcinogenicity: None Known ☒ NTP ☐ IARC ☐ OSHA Regulated ☐

Medical Conditions Generally Aggravated by Exposure
None known

Signs and Symptoms of Exposure.
May cause eye and skin irritation.

Emergency and First Aid Procedures:

In case of contact with eyes or skin, rinse thoroughly with water for 15 minutes. Call a physician if irritation persists. If swallowed, call a physician or Poison Control Center. If inhaled, remove to fresh air.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Small Spill: Mop up with detergent, rinse with water. Large Spill: Mop up, absorb with an inert absorbent, dike or turn container over as applicable.

Waste Disposal Method.

Small Amount: Dispose in trash container. Large Amount: Dispose in accordance with Local, State and Federal regulations.

Potential EPA Hazardous Waste Code(s): N/A

Steps to be taken in handling and storage

Store at 40 - 90F. Keep from freezing. Read and follow label use directions. Keep out of reach of children.

SECTION VIII - CONTROL MEASURES**Respiratory Protection (Specify Type):**

None required

Ventilation: Local Exhaust _____ Special _____
Mechanical Recommended

Protective Gloves Optional Eye Protection Recommended

Other Protective Clothing and Equipment:

None required

SECTION IX - SHIPPING INFORMATION**DOT Proper Shipping Name and Number:**

Not regulated

NE = Not Established

N/A = Not Applicable

Product Name: ISOPROPYL ALCOHOL
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SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: ISOPROPYL ALCOHOL
Product Description: Oxygenated Hydrocarbon
Product Code: 9115
Intended Use: Solvent

COMPANY IDENTIFICATION

Supplier: CIOL - EXXONMOBIL CHEMICAL CANADA
Division of Canada Imperial Oil Limited, an Affiliate of Exxon Mobil Corporation
240 4TH AVENUE S.W.
CALGARY, ALBERTA, T2P 3M9 Canada
24 Hour Health Emergency 1-866-232-9563
Transportation Emergency Phone 1-866-232-9563
Product Technical Information 1-800-663-4109

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 2.

Eye irritation: Category 2A. Specific target organ toxicant (central nervous system): Category 3.

LABEL:

Pictogram:



Signal Word: Danger

Hazard Statements:

H225: Highly flammable liquid and vapor. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness.

Precautionary Statements:

Product Name: ISOPROPYL ALCOHOL

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P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233: Keep container tightly closed. P240: Ground / bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating, and lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P261: Avoid breathing mist / vapours. P264: Wash skin thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves and eye / face protection. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P337 + P313: If eye irritation persists: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish. P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents and container in accordance with local regulations.

Contains: ISOPROPYL ALCOHOL

Other hazard information:

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1900.1200.

PHYSICAL / CHEMICAL HAZARDS

Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited.

HEALTH HAZARDS

May be irritating to the skin, nose, throat, and lungs. May cause central nervous system depression. If swallowed, may be aspirated and cause lung damage.

ENVIRONMENTAL HAZARDS

No significant hazards.

NFPA Hazard ID:	Health: 2	Flammability: 3	Reactivity: 0
HMIS Hazard ID:	Health: 2*	Flammability: 3	Reactivity: 0

NOTE: This material should not be used for any other purpose than the Intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
ISOPROPYL ALCOHOL	67-63-0	100 %	H225, H305, H336, H319(2A)

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and

Product Name: ISOPROPYL ALCOHOL

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exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water for at least 15 minutes. Get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Highly flammable. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: 12°C (54°F) [ASTM D-56]

Flammable Limits (Approximate volume % in air): LEL: 2.0 UEL: 13

Autoignition Temperature: >350°C (662°F) [Technical literature]

Product Name: ISOPROPYL ALCOHOL
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SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid contact with eyes. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Peroxides may form upon prolonged storage. Exposure to light, heat or air significantly increases peroxide formation. If evaporated to a residue, the mixture of peroxides residue and material vapor may explode when exposed to heat or shock. Prevent small spills and leakage to avoid slip hazard.



Product Name: ISOPROPYL ALCOHOL

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Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is not a static accumulator.

STORAGE

Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Tankers; Barges

Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene; Copper Bronze; Epoxy Phenolic; Zinc; Vinyls

Unsuitable Materials and Coatings: Aluminum; Cast iron; Polystyrene; Ethylene-propylene-diene monomer (EPDM); Monel; Butyl Rubber; Natural Rubber

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard			NOTE	Source
ISOPROPYL ALCOHOL		TWA	980 mg/m ³	400 ppm	N/A	OSHA Z1
ISOPROPYL ALCOHOL		STEL	400 ppm		N/A	ACGIH
ISOPROPYL ALCOHOL		TWA	200 ppm		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological Limits

Substance	Specimen	Sampling Time		Determinant	Source
ISOPROPYL ALCOHOL	Urine	End of shift at end of work wk	40 mg/l	Acetone	ACGIH BELs (BEIs)

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Product Name: ISOPROPYL ALCOHOL

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Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: Chemical goggles are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Form: Clear
Color: Colorless
Odor: Alcohol
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Product Name: ISOPROPYL ALCOHOL

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Relative Density (at 20 °C): 0.786 [With respect to water] [Calculated]
Density (at 20 °C): 785 kg/m³ (6.55 lbs/gal, 0.79 kg/dm³) [ISO 12185]
Flammability (Solid, Gas): N/D
Flash Point [Method]: 12°C (54°F) [ASTM D-56]
Flammable Limits (Approximate volume % in air): LEL: 2.0 UEL: 13
Autolignition Temperature: >350°C (662°F) [Technical literature]
Boiling Point / Range: 82°C (180°F) - 83°C (181°F) [ASTM D1078]
Decomposition Temperature: N/D
Vapor Density (Air = 1): > 1 at 101 kPa [Calculated]
Vapor Pressure: 4.3 kPa (32.25 mm Hg) at 20 °C [Calculated]
 [In-house method]
Evaporation Rate (n-butyl acetate = 1): 3.9 [In-house method]
pH: N/D
Log Pow (n-Octanol/Water Partition Coefficient): 0.05 [Technical literature]
Solubility in Water: Complete
Viscosity: [N/D at 40 °C] | 2.66 cSt (2.66 mm²/sec) at 25°C [ASTM D7042]
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: -89°C (-128°F) [Technical literature]
Molecular Weight: 60 G/MOLE [Calculated]
Hygroscopic: Yes
Coefficient of Thermal Expansion: 0.00117 V/VDEGC [In-house method]

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: See sub-sections below.

STABILITY: Under normal storage conditions peroxides may accumulate and explode when subjected to heat or shock. Distillation or evaporation increases peroxide formation and increases the explosion hazard.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Aldehydes, Amines, Strong oxidizers, Caustics, Chlorinated Compounds, Alkanolamines

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 6 hour(s) LC50 > 25000 mg/m3 (Vapor)	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or

Product Name: ISOPROPYL ALCOHOL

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	lungs.
Ingestion	
Acute Toxicity (Rat): LD50 5840 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD50 13900 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	May dry the skin leading to discomfort and dermatitis. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404
Eye	
Serious Eye Damage/Irritation: Data available.	Irritating and will injure eye tissue. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 405
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be harmful if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available.	Not expected to be a germ cell mutagen. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 471 474 476
Carcinogenicity: Data available.	Not expected to cause cancer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 451
Reproductive Toxicity: Data available.	Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414 415 416
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	May cause drowsiness or dizziness.
Repeated Exposure: Data available.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 413

OTHER INFORMATION

For the product itself:

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--



Product Name: ISOPROPYL ALCOHOL

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1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

MOBILITY

Material -- Expected to remain in water or migrate through soil.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be readily biodegradable.

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade at a moderate rate in air

OTHER ECOLOGICAL INFORMATION

VOC (EPA Method 24): 6.551 lbs/gal

ECOLOGICAL DATA

Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	24 hour(s)	Daphnia magna	LC50 9714 mg/l: data for the material
Aquatic - Acute Toxicity	96 hour(s)	Pimephales promelas	LC50 9640 mg/l: data for the material
Aquatic - Acute Toxicity	8 day(s)	Alga	LOEC 1000 mg/l: data for the material

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Octanol-Water	Calculated		log Kow 0.05 : material
Water	Ready Biodegradability	5 day(s)	Percent Degraded 53 : material

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.



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DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14: TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: ISOPROPANOL
Hazard Class & Division: 3
ID Number: 1219
Packing Group: II
ERG Number: 129
Label(s): 3
Transport Document Name: UN1219, ISOPROPANOL, 3, PG II

LAND (TDG)

Proper Shipping Name: ISOPROPANOL
Hazard Class & Division: 3
UN Number: 1219
Packing Group: II

SEA (IMDG)

Proper Shipping Name: ISOPROPANOL
Hazard Class & Division: 3
EMS Number: F-E, S-D
UN Number: 1219
Packing Group: II
Marine Pollutant: No
Label(s): 3
Transport Document Name: UN1219, ISOPROPANOL, 3, PG II, (12°C c.c.)

AIR (IATA)

Proper Shipping Name: ISOPROPYL ALCOHOL
Hazard Class & Division: 3
UN Number: 1219
Packing Group: II



Product Name: ISOPROPYL ALCOHOL
Revision Date: 09 Jan 2015
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Label(s) / Mark(s): 3

Transport Document Name: UN1219, ISOPROPYL ALCOHOL, 3, PG II

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

EPCRA SECTION 302: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ISOPROPYL ALCOHOL	67-63-0	100 %

Isopropyl alcohol is reportable under SARA 313 only when it is manufactured in a strong acid process.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ISOPROPYL ALCOHOL	67-63-0	1, 4, 13, 16, 17, 18, 19

—REGULATORY LISTS SEARCHED—

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for Information only):

H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2

H305: May be harmful if swallowed and enters airways; Aspiration, Cat 2

H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A

H336: May cause drowsiness or dizziness; Target Organ Single, Narcotic



Product Name: ISOPROPYL ALCOHOL

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THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Updates made in accordance with implementation of GHS requirements.

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Internal Use Only

MHC: 2A, 0, 0, 2, 1, 1

DGN: 5007530 (1004616)

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Activity by Contract and Waste Generator

Date Range: 1/26/2010 to 10/26/2015

CCL Label: 14084

Special Waste Only
Detail Report

Date	Ticket	Material	Reference	Ticket Count	Tons	Tracking QTY	Tracking UOM	Billing QTY	Billing UOM
Contract - 4217Y432706-VACUUM Generator: 4284 CCL INSERTCO									
4/13/11	555741	FEE-HAU/TRANS/TRUCK	MA11836/ST 6432	15	0.00	1.00	EA	1.00	EA
4/13/11	555741	SW-SPECIAL WASTE-LIQUID	MA11836/ST 6432		0.00	800.00	GL	800.00	GL
4/13/11	555741	SW-SPECIAL WASTE-LIQUID	MA11836/ST 6432		3.28	0.00	GL	3.28	TH
1/24/12	548237	FEE-HAU/TRANS/TRUCK	MA11836/ST 10898		0.00	1.00	EA	1.00	EA
1/24/12	548237	SW-SPECIAL WASTE-LIQUID	MA11836/ST 10898		0.00	800.00	GL	800.00	GL
1/24/12	548237	SW-SPECIAL WASTE-LIQUID	MA11836/ST 10898		3.38	0.00	GL	3.38	TH
2/5/13	829743	FEE-HAU/TRANS/TRUCK	MA30107/ST 15102		0.00	1.00	EA	1.00	EA
2/2/13	829743	SW-SPECIAL WASTE-LIQUID	MA30107/ST 15102		0.00	1,000.00	GL	1,000.00	GL
2/2/13	829743	SW-SPECIAL WASTE-LIQUID	MA30107/ST 15102		4.55	0.00	GL	4.55	TH
1/15/13	907208	FEE-HAU/TRANS/TRUCK	MA38232/ST 17836		0.00	1.00	EA	1.00	EA
1/15/13	907208	SW-SPECIAL WASTE-LIQUID	MA38232/ST 17836		3.72	800.00	GL	800.00	GL
8/5/14	1024165	FEE-HAU/TRANS/TRUCK	MA41876/ST 18985		0.00	1.00	EA	1.00	EA
8/5/14	1024165	SW-SPECIAL WASTE-LIQUID	MA41876/ST 18985		3.28	800.00	GL	800.00	GL
9/25/15	1033608	FEE-HAU/TRANS/TRUCK	ma46490x.21000		0.00	1.00	EA	1.00	EA
9/25/15	1033608	SW-SPECIAL WASTE-LIQUID	ma46490x.21000		8.38	800.00	GL	800.00	GL
Grand Totals					23.54	5,100.00	EA GL	5,117.20	E G T

CES

49490

Generator (Generator completes Ia-r)
 US EPA ID Number

b. Manifest Document Number

If waste is asbestos waste, complete Sections I, II, III and IV
 If waste is NOT asbestos waste, complete Sections I, II and III

c. Page 1 of

Generator's Name and Location:

e. Generator's Mailing Address:

f. Phone:

(187) 892-1268 CCL Insetco

g. Phone:

CCL Insetco
 CEN #162 Lin 33.2
 Surry, VA 22683

If owner of the generating facility differs from the generator, provide:

h. Owner's Name:

i. Owner's Phone No.:

j. Waste Profile #

k. Exp. Date

l. Waste Shipping Name and Description

m. Containers
No. Type

n. Total Quantity

o. Unit Wt/Vol

42174432706

11/9/2015

Ink Residue

01

VT

800G/4

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

i. Generator Authorized Agent Name (Print)

q. Signature

9-25-15

r. Date

TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)
 s. Transporter's Name and Address:

t. Phone:

u. Driver Name (Print)

v. Signature

w. Date

DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)
 Disposal Facility and Site Address: (787) 841-7775

PONCE LANDFILL
 AVE. BARAMAYA #500
 PONCE, P.R. 00737

c. US EPA Number

d. Discrepancy Indication Space:

IDF-58-0008

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent (Print)

f. Signature

g. Date

ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)
 Operator's Name and Address:

c. Responsible Agency Name and Address:

h. Phone:

d. Phone:

Special Handling Instructions and Additional Information:

☐ Friable ☐ Non-Friable ☐ Both

% Friable

% Non-Friable

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Operator's Name and Title (Print)

h. Signature

i. Date

Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

5/10

RETURN TO OPERATOR

AW-F11APR

44217001408400000000331010000752250000752258



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

41979

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: CCL LABEL ET Retiro Industrial Park Cor 302 Singenon, PR		e. Generator's Mailing Address: CCL LABEL Retiro Industrial Park Singenon, PR			
f. Phone: (787) 842-1208		g. Phone: Singenon, PR			
If owner of the generating facility differs from the generator, provide					
h. Owner's Name			i. Owner's Phone No		
j. Waste Profile #	k. Exp Date	l. Waste Shipping Name and Description	m. Containers No	n. Total Quantity	o. Unit Wt/Vol
42174432706	11/9/2015	Ink Residue	01	VT	800 Gall
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print): Carlos E Martinez Toro		q. Signature: Carlos E Martinez Toro		r. Date: 8-5-14	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Industrial Hydraulics	
b. Phone: (787) 836-1290	
c. Driver Name (Print): Jose Ortiz	d. Signature: Jose Ortiz
e. Date: 8-5-14	

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: (787) 841-7775 PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732	b. US EPA Number: IDF-58-0008	c. Discrepancy Indication Space
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print): Walter McIlm	f. Signature: Walter McIlm	g. Date: 08/05/14

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address	
b. Phone: 4		d. Phone	
e. Special Handling Instructions and Additional Information			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print):		h. Signature:	
i. Date:		i. Date:	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

36923

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location CCL Industrial Park Corp #302 111 842-1268 Sangermon, PR		e. Generator's Mailing Address CCL Industrial Mail #302 Sangermon, PR			
f. Phone:		g. Phone			
h. Owner's Name:		i. Owner's Phone No			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type	n. Total Quantity	o. Unit Wt/Vol
42m44-32706	11/9/2015	Ink residue	01 RT	200	
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations, AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print)		q. Signature		r. Date	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: J Transporter (787) 837-0502		b. Phone:	
c. Driver Name (Print)	d. Signature	e. Date	

III. DESTINATION (Generator completes IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARMAYA #500 PONCE, P.R. 00732	b. US EPA Number IDF-58-0008	c. Discrepancy Indication Space: Cliente firmo en el espacio equivocado del manifiesto.
d. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print)	f. Signature	g. Date

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address	
b. Phone:		d. Phone	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	
i. Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both		j. Date	



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

00107

GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: G-L Inertco Box 377 Km 32.2 San Juan, P.R.			e. Generator's Mailing Address: G-L Inertco Box 377 San Juan, P.R. 00653		
f. Phone: 781 812-1268			g. Phone: 781 812-1268		
h. Owner's Name: TIA 812-1268			i. Owner's Phone No. 781 812-1268		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type	n. Total Quantity	o. Unit Wt/Vol
4217 1-32906	11/7/2015	Ink Residue	01 VT	1,000	gls
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print): Carlos E Martinez		q. Signature: Carlos E Martinez		r. Date: 2-8-13	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Inertco Hydrovac		
b. Phone: 781 812-1268		
c. Driver Name (Print): Abraham Arroyo	d. Signature: [Signature]	e. Date: 2-8-13

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		b. US EPA Number: IDF-58-0008	c. Discrepancy Indication Space
d. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print): [Signature]		f. Signature: [Signature]	g. Date: 2-8-13

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print):		h. Signature:	
i. Date:		j. Date:	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: CCB Insectco 130x 377 San German, PR			e. Generator's Mailing Address: CCB Insectco 130x 377 San German, PR		
f. Phone: 786-411-9021			g. Phone: 786-411-9021		
h. Owner's Name: i. Owner's Phone No:					
j. Waste Profile #		k. Exp. Date	l. Waste Shipping Name and Description		m. Containers No. Type
421744-32706		09/07/2012	Ink Residue		01 VT
					n. Total Quantity
					9006.1
					o. Unit Wt/Vol

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print): Carlos E. Martinez	q. Signature: <i>Carlos E. Martinez</i>	r. Date: 12-29-2012
--	---	---------------------

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Industrials Hydrovac		
b. Phone: 786-11836-1750		
c. Driver Name (Print): William Garriga	d. Signature: <i>W. Garriga</i>	e. Date: 24-1-12

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE/LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		b. c US EPA Number	d. Discrepancy Indication Space:
b. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print): <i>Alfonso</i>	f. Signature: <i>Alfonso</i>	g. Date: 1/24/12	

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print):		h. Signature	
		i. Date	



11636

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: CCL INSERTECO Rue 11 Km 33.2 (Parque Int. Par.) San German, P.R.		e. Generator's Mailing Address: CCL INSERTECO P.O. Box 377 San German, P.R. 00683			
f. Phone:		g. Phone:			
h. Owner's Name:		i. Owner's Phone No: 40. 0224			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
421744-32706	07/07/2012	Ink Water Residue	01	VT	800 g/s

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Edgar Cordero Rodriguez
Generator Authorized Agent Name (Print) Signature Date 4/13/2011

TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

IIa. Transporter's Name and Address: Industria Hymetec		IIb. Transporter's Phone: (787) 836-1296	
IIc. Driver Name (Print): Jorben Arroyo	IIe. Driver's Signature: A. [Signature]	IIe. Date: 4-13-11	

DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

IIIa. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		IIIb. US EPA Number	IIIc. Discrepancy Indication Space: [Initials]
IIId. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
IIIf. Name of Authorized Agent (Print): Walter Melchior	IIIf. Signature: [Signature]	IIIf. Date: 4/13/11	

ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

IVa. Operator's Name and Address:		IVc. Responsible Agency Name and Address:	
IVb. Phone:		IVd. Phone:	
IVe. Special Handling Instructions and Additional Information:			
IVf. Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both <input type="checkbox"/> % Friable % Non-Friable			
IVg. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
IVh. Generator's Name and Title (Print):	IVh. Signature:	IVh. Date:	
IVi. Generator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



FIBRAS INTERNACIONALES DE PUERTO RICO

P.O. BOX 7432 PONCE P.R. 00732

TELEF. (787) 812-0550 / 812-0545 FAX No. (787) 812-0540

FAX MESSAGE

42319

FECHA / DATE : noviembre 11, 2015

PARA / TO : Figueroa, Yvette

COMPANIA : CCL INSERCO

FAX No. : (787) 892-4112 y.figueroa@cclind.com

DE / FROM : JOHN RIVERA

REF : Compras cinco años (Expresado en T/m)

TOTAL NUMERO DE PAGINAS	1	(INCLUYENDO ESTA)
TOTAL NUMBER OF PAGES		(INCLUDING THIS)

MENSAJE

Periodo	MATERIAL	
	Papel Blanco	OCC
2010	421	0
2011	566	0
2012	623	14
2013	486	14
2014	492	6
2015	563	0
	3.051	34

ENVIADO POR : John Rivera
SENT BY :

SERVICIOS FRONT LOADERS DE 8 YARDAS

<i>Fechas Aproximadas</i>	<i>Semanas</i>	<i>Servicios por semana</i>	<i>Yardas Cúbicas</i>	<i>Total de yardas por año</i>
2011	52	3	8	1248
2012	52	3	8	1248
2013	14	3	8	1248
2013	38	2	8	608
2014	52	2	8	832
2015 (hasta el 15 de mayo de 2015)	20	2	8	320
2015 (al 31 de octubre de 2015)	24	3	8	576
TOTAL DE YARDAS AVERAGE				6,080 1,216



Activity by Contract and Waste Generator

Date Range: 1/26/2010 to 10/26/2015

CCL Label: 14084
Special Waste Only
Detail Report

Date	Ticket	Material	Reference	Ticket Count	Tons	Tracking QTY	Tracking UOM	Billing QTY	Billing UOM
Contract - 4217432708-VACUUM Generation 4284 CCL INSERTCO									
4/12/11	553741	FEE-HAUL/TRANS/TRUCK	MA110305T 6432		0.00	1.00	EA	1.00	EA
4/12/11	553741	SW-SPECIAL WASTE-LIQUID	MA110305T 6432		0.00	600.00	GL	600.00	GL
4/12/11	553741	SW-SPECIAL WASTE-LIQUID	MA110305T 6432		3.26	0.00	GL	3.26	TH
1/24/12	558257	FEE-HAUL/TRANS/TRUCK	MA105644ST 10690		0.00	1.00	EA	1.00	EA
1/24/12	558257	SW-SPECIAL WASTE-LIQUID	MA105644ST 10690		0.00	600.00	GL	600.00	GL
1/24/12	558257	SW-SPECIAL WASTE-LIQUID	MA105644ST 10690		3.39	0.00	GL	3.39	TH
2/8/13	829743	FEE-HAUL/TRANS/TRUCK	MA301075T 15102		0.00	1.00	EA	1.00	EA
2/8/13	829743	SW-SPECIAL WASTE-LIQUID	MA301075T 15102		0.00	1,000.00	GL	1,000.00	GL
1/15/13	897208	FEE-HAUL/TRANS/TRUCK	MA301075T 15102		4.55	0.00	GL	4.55	TH
1/15/13	897208	SW-SPECIAL WASTE-LIQUID	MA301075T 15102		0.00	1.00	EA	1.00	EA
8/5/14	1024185	FEE-HAUL/TRANS/TRUCK	MA301075T 15102		3.72	600.00	GL	600.00	GL
8/5/14	1024185	SW-SPECIAL WASTE-LIQUID	MA301075T 15102		0.00	1.00	EA	1.00	EA
9/25/15	1083808	FEE-HAUL/TRANS/TRUCK	MA118716ST 18965		3.20	600.00	GL	600.00	GL
9/25/15	1083808	SW-SPECIAL WASTE-LIQUID	MA118716ST 18965		0.00	1.00	EA	1.00	EA
9/25/15	1083808	SW-SPECIAL WASTE-LIQUID	MA118716ST 18965		5.36	600.00	GL	600.00	GL
Grand Totals				18	23.54	6.00	EA	6.00	E
						5,100.00	GL	5,100.00	G
								11.20	T

ES 49490

ATOR (Generator completes Ia-r)
US EPA ID Number

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

b. Manifest Document Number

c. Page 1 of

Generator's Name and Location:

o. Generator's Mailing Address:

f. Phone: (187) 892-1268 CCL Insect Co

g. Phone:

If owner of the generating facility differs from the generator, provide:

h. Owner's Name:

i. Owner's Phone No.:

j. Waste Profile #

k. Exp. Date

l. Waste Shipping Name and Description

m. Containers
No. Type

n. Total Quantity

o. Unit W/Vol

42M4432706

11/9/2015

Ink Residue

01

VT

800G/4

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Carlos E Martinez for CCL Insect Co
i. Generator Authorized Agent Name (Print) q. Signature

9-25-15
r. Date

I. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

Transporter's Name and Address:

Industrial Hydraulics
(787) 896-1290

Phone:

Driver Name (Print) s. Signature

9/25/2015
e. Date

II. DESTINATION (Generator complete IIa-c and Destination Site completes IIId-g)

Disposal Facility and Site Address: (787) 841-7775
PONCE LANDFILL
AVE. BARAMAYA #500
PONCE, P.R. 00732

c. US EPA Number

d. Discrepancy Indication Space:

IDF-58-0008

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent (Print) f. Signature

g. Date

ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

Operator's Name and Address:

c. Responsible Agency Name and Address:

Phone:

d. Phone:

Special Handling Instructions and Additional Information:

☐ Friable ☐ Non-Friable ☐ Both

% Friable

% Non-Friable

ATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Operator's Name and Title (Print)

h. Signature

i. Date

Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

5/10

RETURN TO OPERATOR

AW-F11APR

44217001408400000000331010000752250000752258



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

41979

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location: CCL LABEL ET Retiro Industrial Park Cor 302 Singermon, PR		e. Generator's Mailing Address: CCL LABEL Retiro Industrial Park Singermon, PR			
f. Phone: (787) 842-1268		g. Phone			
h. Owner's Name		i. Owner's Phone No			
j. Waste Profile #	k. Exp Date	l. Waste Shipping Name and Description	m. Containers No	n. Total Quantity	o. Unit Wt/Vol
42174432706	11/9/2015	Ink Residue	01	VT	800 Gals
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Carlos E Martinez Toro		q. Signature Carlos E Martinez Toro		r. Date 8-5-14	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Industrial Hydravac		
b. Phone: (787) 836-1290		
c. Driver Name (Print) Jose Ortiz	d. Signature Jose Ortiz	e. Date 8-5-14

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		c. US EPA Number IDF-58-0008	d. Discrepancy Indication Space
b. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print) Walter Matos		f. Signature Walter Matos	g. Date 08/05/14

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address	
b. Phone:		d. Phone	
e. Special Handling Instructions and Additional Information			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	
i. Date		j. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

36923

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
d. Generator's Name and Location CCL Industries El Centro Industrial Park Cor # 302 (787) 892-1268 Sangreman, PR		e. Generator's Mailing Address CCL Industries Box # 302 Sangreman, PR			
f. Phone:		g. Phone			
h. Owner's Name:		i. Owner's Phone No			
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type	n. Total Quantity	o. Unit Vol
42IN44-32706	11/9/2015	Ink residue	01 RT	200	

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations, AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

TSK Luvine Munguza

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
--	--------------	---------

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: J Transporter (787) 837-0502		b. Phone:	
c. Driver Name (Print)	d. Signature	e. Date	

III. DESTINATION (Generator completes IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732	b. US EPA Number IDF-58-0008	c. Discrepancy Indication Space: Cliente firma en el espacio equivocado del manifiesto.
d. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print)	f. Signature	g. Date

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	b. Phone:	c. Responsible Agency Name and Address
d. Special Handling Instructions and Additional Information:		e. Phone:
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable		
g. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.		
h. Operator's Name and Title (Print)	i. Signature	j. Date
k. Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both.		



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

50107

GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
Generator's Name and Location: G-L Inertco 2400 Inland Blvd Km 32.2 n 1200 n. pr			e. Generator's Mailing Address G-L Inertco Box 300 Km 32.2 n 1200 n. pr 60653		
f. Phone: 741) 612-1268			g. Phone: 741) 612-1268		
h. Owner's Name: TIA 612-1268			i. Owner's Phone No: 741) 612-1268		
j. Waste Profile #		k. Exp. Date	l. Waste Shipping Name and Description		m. Containers No Type
4217 1-32906		11/7/2015	Ink Residue		01 VT 1,000 g/s
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations, AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print): Carlos E Martinez			q. Signature: Carlos E Martinez		r. Date: 2-8-13

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Inland Hydrovac		
b. Phone: 741) 36-1290		
c. Driver Name (Print): Abraham Arroyo	d. Signature: [Signature]	e. Date: 2-8-13

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE LANDFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		b. US EPA Number: IDF-58-0008	c. Discrepancy Indication Space
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print): [Signature]		f. Signature: [Signature]	g. Date: 2-8-13

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print):		h. Signature:	
i. Date:		j. Date:	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

Generator (Generator completes Ia-r)

US EPA ID Number		b. Manifest Document Number		c. Page 1 of	
a. Generator's Name and Location: CCL Insentco Industrial Park P.O. Box 402 Km 32.2 Sangeren, PA			a. Generator's Mailing Address: CCL Insentco 150x 377 San German, PA		
f. Phone:			g. Phone:		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description		m. Containers No. Type	n. Total Quantity
421744-32706	09/07/2012	Ink Residue		01 VT	700G

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print): Carlos E. Martinez	q. Signature: Carlos E. Martinez	r. Date: 29-2012
---	-------------------------------------	---------------------

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: Industrial Hydraulics		
b. Phone: 761) 836-1710		
c. Driver Name (Print): William Garriga	d. Signature: W. Garriga	e. Date: 24-1-12

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: PONCE/BAÑFILL AVE. BARAMAYA #500 PONCE, P.R. 00732		c. US EPA Number	d. Discrepancy Indication Space:
b. I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print): Juan M. Fely	f. Signature: Juan M. Fely	g. Date: 11/28/12	

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-l)

a. Operator's Name and Address:		c. Responsible Agency Name and Address	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable International and national governmental regulations.			
g. Operator's Name and Title (Print):		h. Signature	
		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

11636

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number

b. Manifest Document Number

c. Page 1 of

d. Generator's Name and Location:

CCC INSERTECO
Rd. # 102 Km 33.2 (Pisque Int. Part)

e. Generator's Mailing Address:

CCC INSERTECO
P.O. Box 377
San German, PR 00683

f. Phone: San German, P.R.

g. Phone:

If owner of the generating facility differs from the generator, provide:

h. Owner's Name:

i. Waste Profile #

k. Exp. Date

l. Waste Shipping Name and Description

m. Containers
No. Type

n. Total Quantity

o. Unit Wt/Vol

421744-32706

07/07/2012

Ink Water Residue

01

VT

800

g/s

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

Edgar Cordero Rodriguez

Edgar Cordero Rodriguez

4/13/2011

Generator Authorized Agent Name (Print)

g. Signature

r. Date

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

Transporter's Name and Address:

Industrial Hydraulic

Phone: (787) 836-1296

SA-57-0045-11

Jochen Arroyo

A. Arroyo

Driver Name (Print)

d. Signature

e. Date

4-13-11

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

Disposal Facility and Site Address:

PONCE LANDFILL
AVE. BARAMAYA #500
PONCE, P.R. 00732

c. US EPA Number

d. Discrepancy Indication Space:

Ph 791

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent (Print)

f. Signature

g. Date

4/13/11

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

Operator's Name and Address:

c. Responsible Agency Name and Address:

Phone:

d. Phone:

Special Handling Instructions and Additional Information:

☒ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

ERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Operator's Name and Title (Print)

h. Signature

i. Date

Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both



Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

November 09, 2012

Luis Perez
CCL LABELS
Carr 102 KM 33.2
San German, PR 00683

RE: Project 20146305
Project ID: SLUDGE IN

Dear Luis Perez:

Enclosed are the analytical results for sample(s) received by the laboratory on October 31, 2012. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Juan Redondo
juan.redondo@pacclabs.com



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Cover 11/9/2012 12:01:11



Laboratory Certifications

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 30146305

Client: CCL LABELS

Project ID: SLUDGE IN

Washington Department of Ecology C2078
Oregon Environmental Laboratory Accreditation - LA200001
U S Dept. of Agriculture Foreign Soil Import P330-10-00119
Pennsylvania Dept. of Env Protection (NELAC) 68-04202
Texas Commission on Env. Quality (NELAC) T104704405-09-TX
Kansas Department of Health and Environment (NELAC) E-10266
Florida Department of Health (NELAC) E87595
Oklahoma Department of Environmental Quality - 2010-139
Illinois Environmental Protection Agency - 0025721
California Env. Lab Accreditation Program Branch - 11277CA
Louisiana Dept. of Environmental Quality (NELAC LELAP) 02006



11/9/2012 12:01:12



Sample Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20146305

Client: CCL LABELS

Project ID: SLUDGE IN

Client Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
SLUDGE IN	201039388	Oil	31-Oct-12 13:30	31-Oct-12 18:00



Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20146305

Sample Receipt Condition:

All samples were received in accordance with EPA protocol

Holding Times:

All holding times were met.

Laboratory Control Samples:

LCS recoveries outside of QC limits are qualified in the Report of Quality Control section

Matrix Spikes and Duplicates:

MS or MSD recoveries outside of QC limits are qualified in the Report of Quality Control section.

Surrogates:

Surrogate recoveries outside of QC limits are qualified in the surrogate results section



QC Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20146305

Analytical Method	Batch	Sample used for QC
EPA 8260	196544	Batch sample from another client

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.

Client sample means a sample from the same client but in a different project was used.

Batch sample means a sample from a different client was used.

Generated: 11/9/2012 12:01:59



Definitions/Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-4333

Project: 20146305

Value	Description
D2	The analysis was performed at a dilution due to the presence of matrix interferences.
Q10	The spike recovery was above the laboratory QC limits, however, the data are reported without qualification since the target analyte was not detected in the corresponding samples.
J	This estimated value for the analyte is below the adjusted reporting limit but above the instrument reporting limit.
U	The analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
B	This analyte was detected in the method blank.
E	The sample concentration is above the linear calibrated range of the analysis.
LCS	Laboratory Control Sample.
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate.
RPD	Relative Percent Difference.



Sample Results

Pace Analytical Services, Inc
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: CCL LABELS

Client ID: SLUDGE IN

Project: 20146305

Project ID: SLUDGE IN

Site: None

Lab ID: 201039388

Matrix: Oil

% Moisture: n/a

Description: None

Prep Level: Soil

Batch: 196544

Method: EPA 8260

GCMS VOAs Full List Med Soil

Collected: 31-Oct-12

Received: 31-Oct-12

Prepared: 08-Nov-12

Units: ug/kg

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
67-64-1	Acetone	5	ND	D2	12500		08-Nov-12 20:17 RMP
71-43-2	Benzene	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-27-4	Bromodichloromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-25-2	Bromoform	5	ND	D2	6250		08-Nov-12 20:17 RMP
74-83-9	Bromomethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
78-93-3	2-Butanone (MEK)	5	ND	D2	12500		08-Nov-12 20:17 RMP
75-15-0	Carbon disulfide	5	ND	D2	6250		08-Nov-12 20:17 RMP
56-23-5	Carbon tetrachloride	5	ND	D2	6250		08-Nov-12 20:17 RMP
108-90-7	Chlorobenzene	5	ND	D2	6250		08-Nov-12 20:17 RMP
73-00-3	Chloromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
67-66-3	Chloroform	5	ND	D2	6250		08-Nov-12 20:17 RMP
74-87-3	Chloromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
96-12-8	1,2-Dibromo-3-chloropropane	5	ND	D2	6250		08-Nov-12 20:17 RMP
124-48-1	Dibromochloromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
106-93-4	1,2-Dibromoethane (EDB)	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-71-8	Dichlorodifluoromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-34-3	1,1-Dichloroethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
107-06-2	1,2-Dichloroethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-35-4	1,1-Dichloroethene	5	ND	D2	6250		08-Nov-12 20:17 RMP
156-59-2	cis-1,2-Dichloroethene	5	ND	D2	6250		08-Nov-12 20:17 RMP
156-60-5	trans-1,2-Dichloroethene	5	ND	D2	6250		08-Nov-12 20:17 RMP
78-87-5	1,2-Dichloropropane	5	ND	D2	6250		08-Nov-12 20:17 RMP
10061-01-5	cis-1,3-Dichloropropene	5	ND	D2	6250		08-Nov-12 20:17 RMP
10061-02-6	trans-1,3-Dichloropropene	5	ND	D2	6250		08-Nov-12 20:17 RMP
64-17-5	Ethanol	5	ND	D2	15000		08-Nov-12 20:17 RMP
100-41-4	Ethylbenzene	5	ND	D2	6250		08-Nov-12 20:17 RMP
591-78-6	2-Hexanone	5	ND	D2	12500		08-Nov-12 20:17 RMP
98-82-8	Isopropylbenzene (Cumene)	5	20500	D2	6250		08-Nov-12 20:17 RMP
79-20-9	Methyl acetate	5	ND	D2	12500		08-Nov-12 20:17 RMP
75-09-2	Methylene chloride	5	ND	D2	6250		08-Nov-12 20:17 RMP
108-10-1	4-Methyl-2-pentanone (MIBK)	5	ND	D2	12500		08-Nov-12 20:17 RMP
1634-04-4	Methyl-tert-butyl ether	5	ND	D2	6250		08-Nov-12 20:17 RMP
100-42-5	Styrene	5	ND	D2	6250		08-Nov-12 20:17 RMP
79-34-5	1,1,2,2-Tetrachloroethane	5	ND	D2	6250		08-Nov-12 20:17 RMP



ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Protocol 11/9/2012 12:02:02
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu Ests qualify. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client requested notification limit.



Sample Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Client: CCL LABELS

Client ID: SLUDGE IN

Project: 20146305

Project ID: SLUDGE IN

Site: None

Lab ID: 201039388

Matrix: Oil

% Moisture: n/a

Description: None

Prep Level: Soil

Batch: 196544

Method: EPA 8260

GCMS VOAs Full List Med Soil

Collected: 31-Oct-12

Received: 31-Oct-12

Prepared: 08-Nov-12

Units: ug/kg

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
127-18-4	Tetrachloroethene	5	ND	D2	6250		08-Nov-12 20:17 RMP
108-88-3	Toluene	5	7890	D2	6250		08-Nov-12 20:17 RMP
71-55-6	1,1,1-Trichloroethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
79-00-5	1,1,2-Trichloroethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
79-01-6	Trichloroethene	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-69-4	Trichlorofluoromethane	5	ND	D2	6250		08-Nov-12 20:17 RMP
75-01-4	Vinyl chloride	5	ND	D2	6250		08-Nov-12 20:17 RMP
	m&p-Xylene	5	12900	D2	6250		08-Nov-12 20:17 RMP
95-47-6	o-Xylene	5	76400	D2	6250		08-Nov-12 20:17 RMP

43 compound(s) reported



ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated

Printed: 11/7/2012 12:02:02
Limits are corrected for sample size, dilution and moisture content if applicable
Qu: Extra qualifiers. Specific qualifiers are defined at the end of the report
Regulatory Limit may denote an actual regulatory limit or a client requested notification limit



Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 196544

Project: 20146305

Method: Soil GC/MS Volatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
201039621	196544 LCS 1		109	114	102					
201039622	F2-2 MS 1		87	93	83					
201039623	F2-2 MSD 1		84	85	81					
201039388	SLUDGE IN		27 D	116	79					
QC limits:			68-124	72-126	79-119					
Sur 1: 4-Bromofluorobenzene (S)										
Sur 2: Dibromofluoromethane (S)										
Sur 3: Toluene-d8 (S)										



* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.

Surrogates 11/9/2012 12:02:03



Quality Control

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 196544

Project: 20146305

LCS: 201039621 08-Nov-12 14:40

Method: Soil GC/MS Volatile Organics

MS: 201039622 08-Nov-12 16:19

Units: ug/kg

MSD: 201039623 08-Nov-12 16:39

Original for MS: Batch Sample 201038890

Parameter Name	LCS Spike	LCS Found	LCS %Rec	MS Spike	Sample Found	MS Found	MSD Found	MS %Rec	MSD %Rec	RPD	QC Limits LCS	Max MS/MSD	Qu RPD
Acetone	2500	5630	225 *	3340	7340	9750	4530	292 *	136	73 *	10-195	10-204	20 Q10
Benzene	2500	2520	101	3340		10500	10300	96	88	3	66-132	58-140	20
Bromodichloromethane	2500	2570	103	3340		2930	2650	88	80	10	67-132	63-137	20
Bromoform	2500	3080	123	3340		3500	2950	105	88	17	53-152	49-156	20
Bromomethane	2500	2280	91	3340		2420	2420	73	73	0	47-150	43-152	20
2-Butanone (MEK)	2500	3540	142	3340		5230	2740	157	82	62 *	16-167	11-180	20
Carbon disulfide	2500	3370	135	3340		3360	3350	101	101	0	18-173	10-184	20
Carbon tetrachloride	2500	2450	98	3340		2740	2640	82	79	3	55-143	50-148	20
Chlorobenzene	2500	2690	108	3340		2870	2870	86	86	0	71-131	69-136	20
Chloroethane	2500	1750	70	3340		1720	2470	52	74	36 *	31-192	20-193	20
Chloroform	2500	2810	112	3340		2950	2840	88	85	4	69-134	65-140	20
Chloromethane	2500	2480	99	3340		2400	2550	72	76	6	29-157	27-160	20
Dibromochloromethane	2500	2800	112	3340		2950	2750	88	82	7	61-138	59-143	20
1,1-Dichloroethane	2500	2850	114	3340		3030	2960	91	89	3	62-137	59-143	20
1,2-Dichloroethane	2500	2870	115	3340		3250	2770	97	83	16	59-145	58-151	20
1,1-Dichloroethene	2500	3080	123	3340		3160	3120	95	94	1	46-156	32-169	20
cis-1,2-Dichloroethene	2500	2680	107	3340		2880	2760	86	83	4	64-131	61-138	20
trans-1,2-Dichloroethene	2500	2910	116	3340		3040	3090	91	93	2	55-138	51-145	20
1,2-Dichloropropane	2500	2850	114	3340		3000	2880	90	86	4	65-130	63-134	20
cis-1,3-Dichloropropene	2500	2470	99	3340		2620	2490	79	75	5	63-137	59-139	20
trans-1,3-Dichloropropene	2500	2550	102	3340		2760	2470	83	74	11	61-143	57-149	20
Ethylbenzene	2500	2520	101	3340		2650	2770	79	83	5	71-130	65-136	20
2-Hexanone	2500	2710	108	3340		3990	2240	120	67	56 *	25-156	21-165	20
Methylene chloride	2500	3310	132	3340		3470	1070	104	32 *	106 *	39-172	33-167	20
4-Methyl-2-pentanone (MIBK)	2500	2590	104	3340		3080	2380	92	71	26 *	43-159	39-167	20
Styrene	2500	2640	106	3340		2810	2810	84	84	0	72-134	62-141	20
1,1,2,2-Tetrachloroethane	2500	3140	126	3340		3470	2910	104	87	18	40-157	35-164	20
Tetrachloroethene	2500	2410	96	3340		2610	2610	78	78	0	55-156	44-162	20
Toluene	2500	2550	102	3340		2790	2740	84	82	2	68-131	60-137	20
1,1,1-Trichloroethane	2500	2550	102	3340		2650	2700	79	81	2	63-133	58-139	20
1,1,2-Trichloroethane	2500	2930	117	3340		3320	2730	99	82	12	61-135	61-140	20
Trichloroethene	2500	2260	90	3340		2490	2480	75	75	8	40-152	32-157	20
Vinyl chloride	2500	2020	81	3340		1920	2070	58	58	85	68-134	60-139	20
m&p-Xylene	5000	5190	104	6670		5420	5680	84	84	84	67-131	60-139	20
o-Xylene	2500	2610	104	3340		2700	2800						20

35 compounds reported



* denotes recovery outside of QC limits.
MS/MSD RPD is calculated via SW-846 rules on the basis of spiked sample concentrations rather than spike recoveries.

QC Protocol 11/9/2012 12:02:04



Pace Analytical Services, Inc.
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Sample Preparation Forms



Sample Preparation MSV

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Method: EPA 5030 Medium Soil
GCMS VOAs Med Soil LCS

Project: 20146305
Batch: 196544

	Type	Lab ID	Client ID	Matrix	Analyst	Date	Initial Sample Size	Final Sample Size	Moisture
1	LCS	201039621	196544 LCS 1		RMP	11/08/2012			
2	MS	201039622	F2-2 MS 1	Soil	RMP	11/08/2012			25
3	MSD	201039623	F2-2 MSD 1	Soil	RMP	11/08/2012			25
4	OQS	201038890		Soil	RMP	11/08/2012			25
5	PS	201038891		Soil	RMP	11/08/2012			24.2
6	PS	201039388	SLUDGE IN	Oil	RMP	11/08/2012			



Pace Analytical Services, Inc.
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St. Rose, LA 70087
(504) 469-0333

Organics Raw Data

Quantitation Report

Data File : R:\DATA\110812\1108L38.D
 Acq On : 8 Nov 2012 8:17 pm
 Sample : 201039388
 Misc : 196544 1:5 MED/1.0g 20uL
 MS Integration Params: RTEINT.P
 Quant Time: Nov 9 9:11 2012

Vial: 38
 Operator:
 Inst : 20msv1
 Multiplr: 1.00

Quant Results File: L100912.RES

Quant Method : C:\DATA\L100912.M (RTE Integrator)
 Title : 8260 LIST L
 Last Update : Thu Nov 08 09:49:35 2012
 Response via : Initial Calibration
 DataAcq Meth : LVOAGC
 IS QA File : C:\DATA\110812\1108L05.D (8 Nov 2012 9:19)

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min) Rcv(Ar)
1) CI05 Pentafluorobenzene	7.19	99	118983	50.00	ppb	-0.01 69.42%
37) CI10 1,4-Difluorobenzene	7.67	114	312514	50.00	ppb	0.00 70.45%
57) CI15 Chlorobenzene-d5	10.21	82	176007	50.00	ppb	0.00 89.82%
70) CI20 1,4-Dichlorobenzene-d	11.60	152	345908	50.00	ppb	0.00 273.30%
System Monitoring Compounds						
35) CS15 Dibromofluoromethane	6.73	113	30047	11.56	ppb	-0.01
Spiked Amount 50.000	Range 72 - 126		Recovery	=		23.12%#
54) CS05 Toluene-d8	9.00	98	69088	7.92	ppb	0.00
Spiked Amount 50.000	Range 79 - 119		Recovery	=		15.84%#
73) CS10 Bromofluorobenzene	10.98	176	19612	2.69	ppb	-0.01
Spiked Amount 50.000	Range 68 - 124		Recovery	=		5.38%#
Target Compounds						
43) F013 Methylcyclohexane	7.67	83	9517	1.87	ppb	# 60
53) B130 Toluene	9.05	91	68847	6.31	ppb	87
67) C250 m-p-Xylene	10.33	106	55835	10.29	ppb	91
68) C250 o-Xylene	10.61	106	295745	61.13	ppb	# 68
71) B195 Isopropylbenzene	10.80	105	752736	16.37	ppb	77
76) B215 n-Propylbenzene	11.04	91	9251081	148.63	ppb	77
78) B230 1,3,5-Trimebenzene	11.28	105	10802184	282.10	ppb	85
82) B235 1,2,4-Trimebenzene	11.28	105	10803753	299.46	ppb	81
83) B245 sec-Butylbenzene	11.43	105	1795946	36.41	ppb	57
84) B255 4-Isopropyltoluene	11.48	119	2587283	69.56	ppb	97
89) B250 n-Butylbenzene	11.72	91	819776	19.28	ppb	# 80
93) B285 Naphthalene	12.88	128	151231	12.45	ppb	100

(#) = qualifier out of range (m) = manual integration
 1108L38.D L100912.M Fri Nov 09 12:02:18 2012

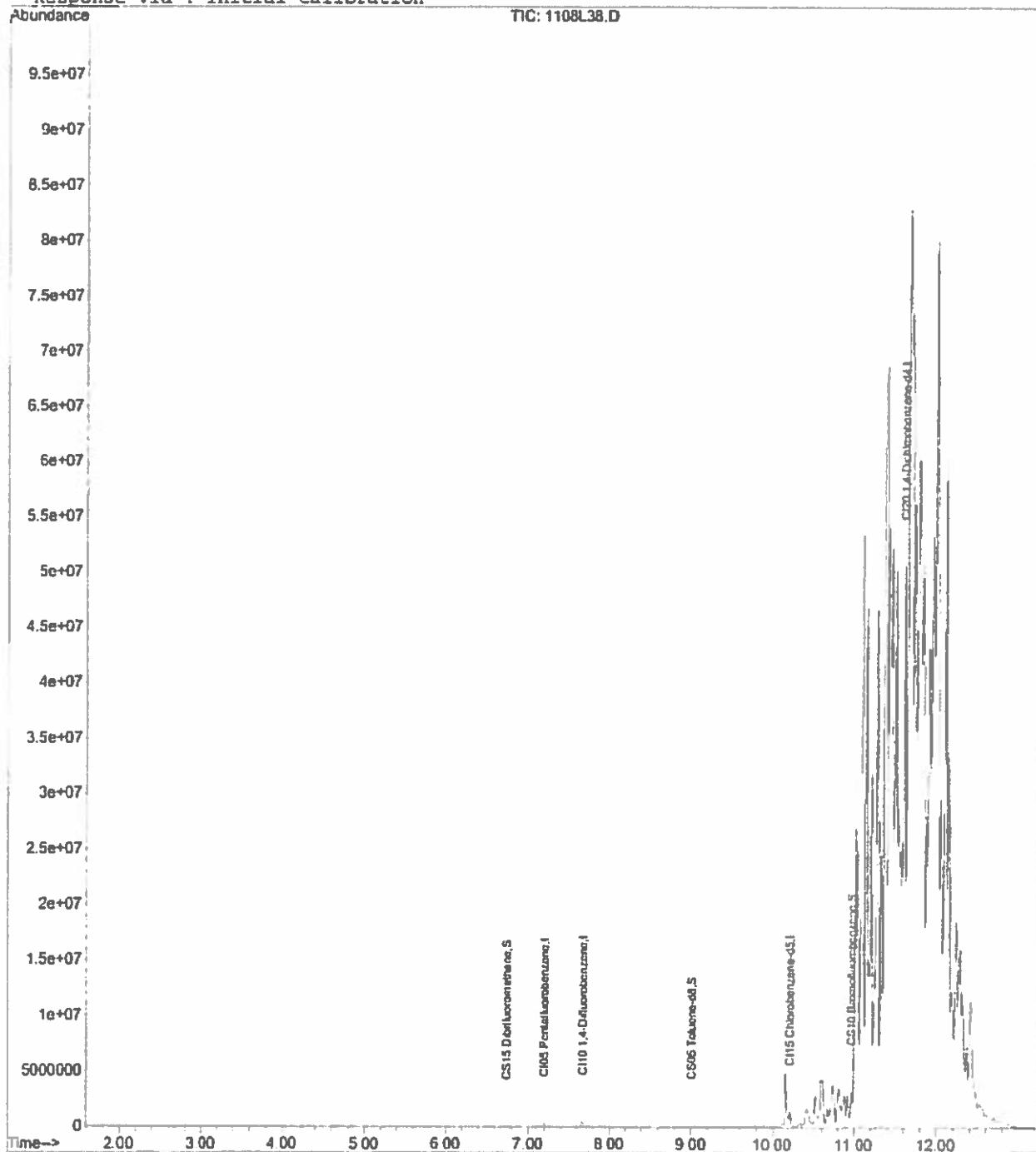
Quantitation Report

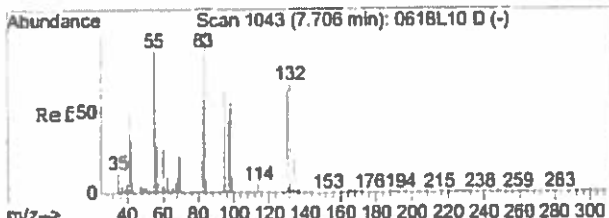
Data File : R:\DATA\110812\1108L38.D
 Acq On : 8 Nov 2012 8:17 pm
 Sample : 201039388
 Misc : 196544 1:5 MED/1.0g 20uL
 MS Integration Params: RTEINT.P
 Quant Time: Nov 9 9:11 2012

Vial: 38
 Operator:
 Inst : 20msvl
 Multiplr: 1.00

Quant Results File: L100912.RES

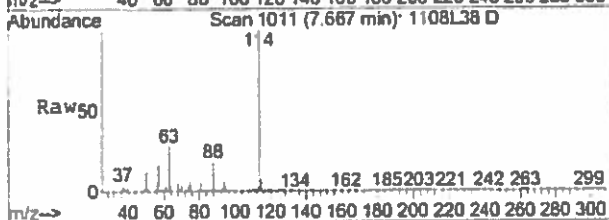
Method : R:\DATA\L100912.M (RTE Integrator)
 Title : 8260 LIST L
 Last Update : Tue Oct 09 13:52:34 2012
 Response via : Initial Calibration





#43
F013 Methylcyclohexane
Concen: 1.87 ppb
RT: 7.67 min Scan# 1011
Delta R.T. 0.02 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

Tgt Ion	83	Resp	9517
Ion Ratio	100	Lower	Upper
55	61.9	78.2	118.2#
98	19.1	31.3	71.3#

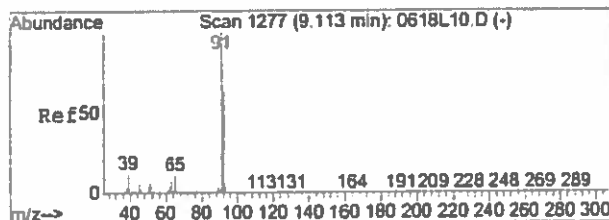
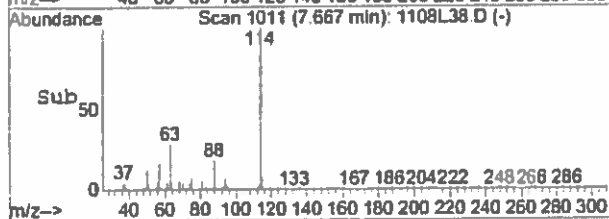
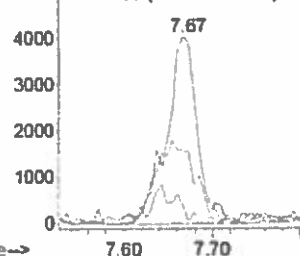


Abundance

Ion 83.00 (82.50 to 83.50): 11

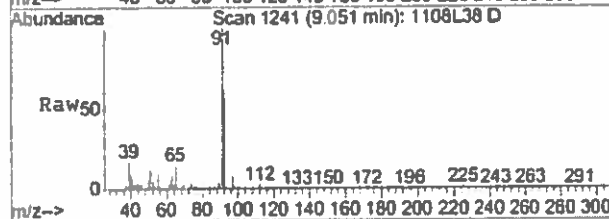
Ion 55.00 (54.50 to 55.50): 11

Ion 98.00 (97.50 to 98.50): 11



#53
B130 Toluene
Concen: 6.31 ppb
RT: 9.05 min Scan# 1241
Delta R.T. 0.00 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

Tgt Ion	91	Resp	68847
Ion Ratio	100	Lower	Upper
92	58.2	49.8	89.8
65	14.2	0.0	38.3

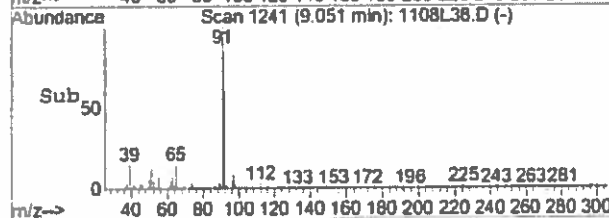
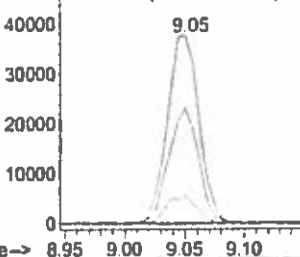


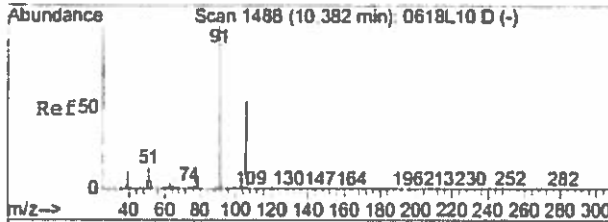
Abundance

Ion 91.00 (90.50 to 91.50): 11

Ion 92.00 (91.50 to 92.50): 11

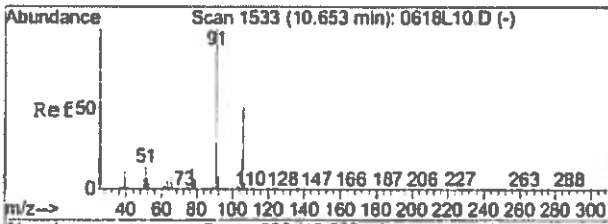
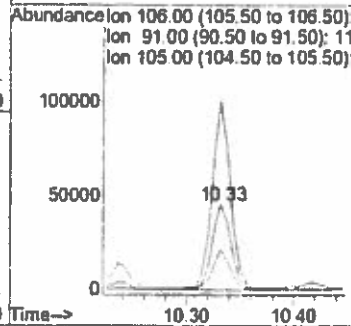
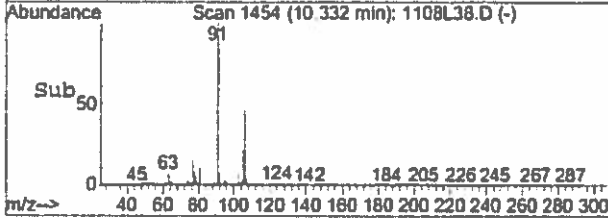
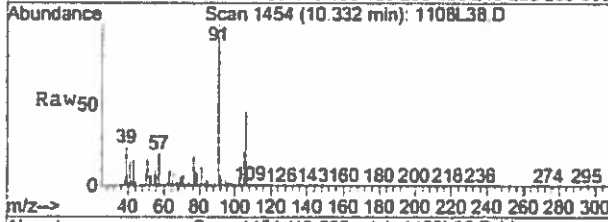
Ion 65.00 (64.50 to 65.50): 11





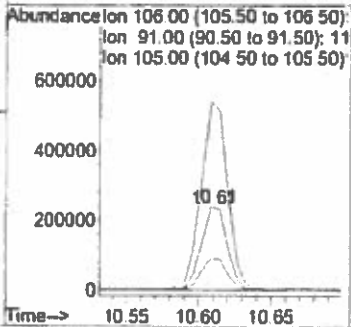
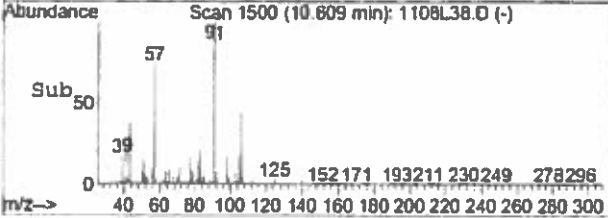
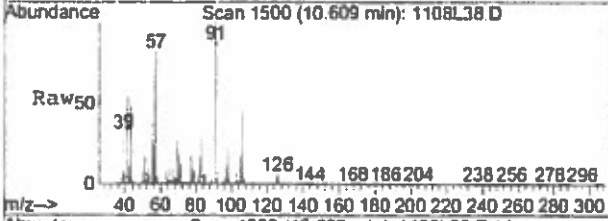
#67
C250 m-p-Xylene
Concen: 10.29 ppb
RT: 10.33 min Scan# 1454
Delta R.T. -0.02 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

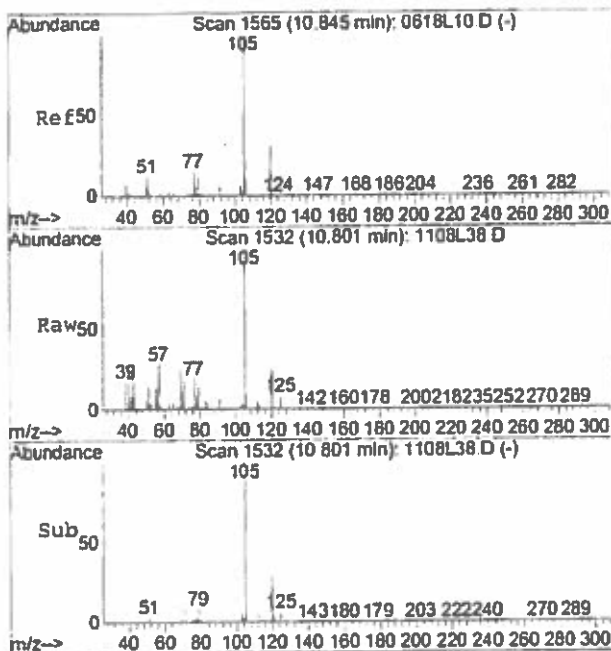
Tgt Ion	Ratio	Lower	Upper
106	100		
91	214.8	177.4	217.4
105	44.2	24.1	64.1



#68
C250 o-Xylene
Concen: 61.13 ppb
RT: 10.61 min Scan# 1500
Delta R.T. -0.00 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

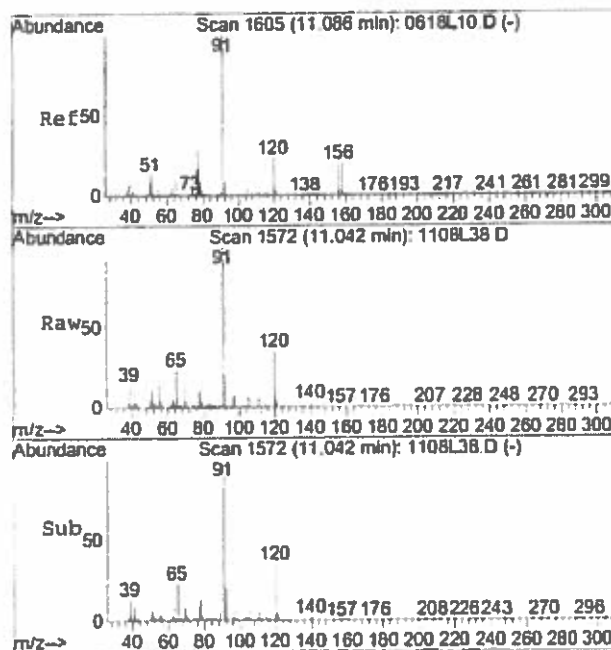
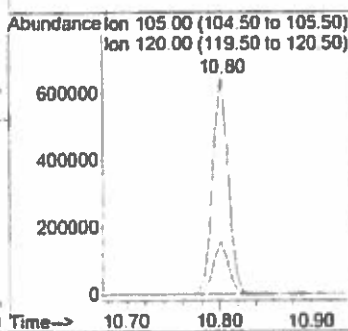
Tgt Ion	Ratio	Lower	Upper
106	100		
91	230.2	155.8	195.8
105	39.7	21.7	61.7





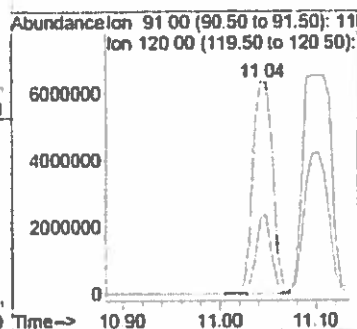
#71
B195 Isopropylbenzene
Concen: 16.37 ppb
RT: 10.80 min Scan# 1532
Delta R.T. -0.01 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

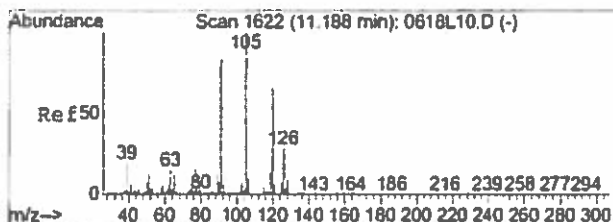
Tgt Ion: 105 Resp: 752736
Ion Ratio Lower Upper
105 100
120 23.7 17.3 57.3



#76
B215 n-Propylbenzene
Concen: 148.63 ppb
RT: 11.04 min Scan# 1572
Delta R.T. -0.01 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

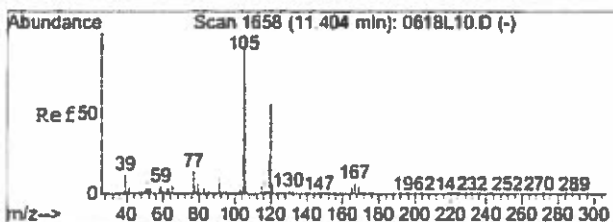
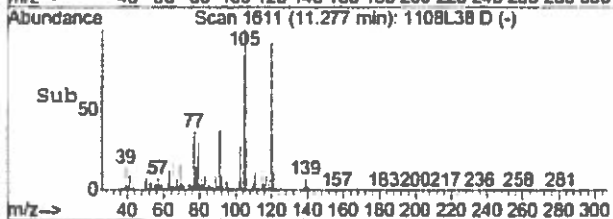
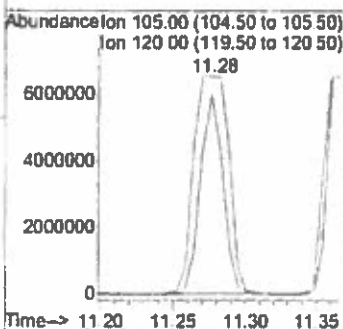
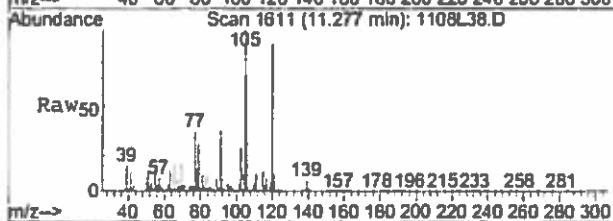
Tgt Ion: 91 Resp: 9251081
Ion Ratio Lower Upper
91 100
120 28.7 0.0 38.3





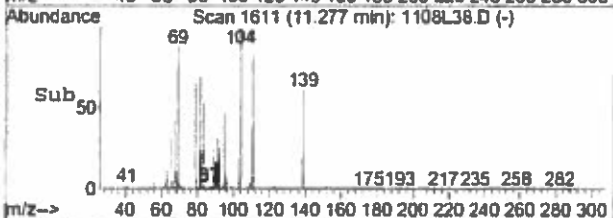
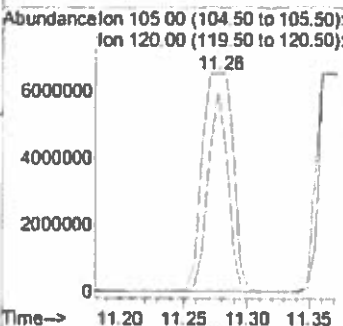
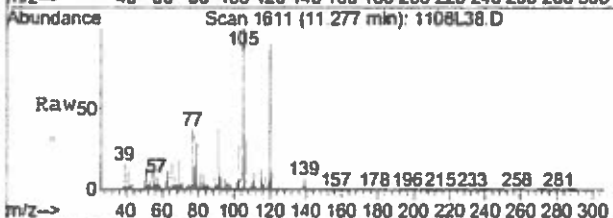
#78
B230 1,3,5-Trimebenzene
Concen: 282.10 ppb
RT: 11.28 min Scan# 1611
Delta R.T. 0.11 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

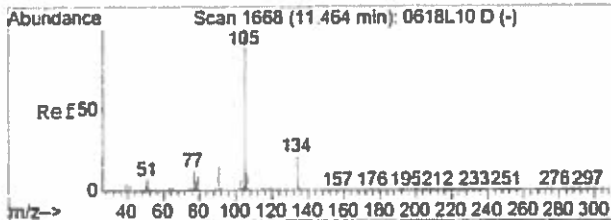
Tgt Ion:105 Resp:10802184
Ion Ratio Lower Upper
105 100
120 58.9 28.6 68.6



#82
B235 1,2,4-Trimebenzene
Concen: 299.46 ppb
RT: 11.28 min Scan# 1611
Delta R.T. -0.08 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

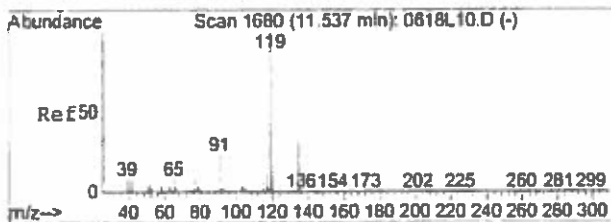
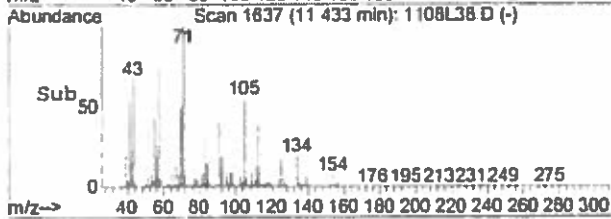
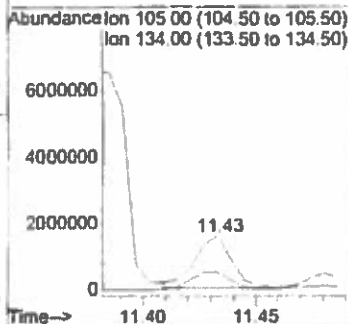
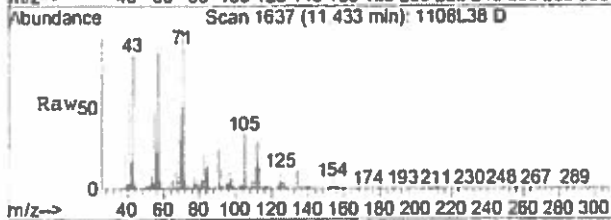
Tgt Ion:105 Resp:10803753
Ion Ratio Lower Upper
105 100
120 58.9 26.5 66.5





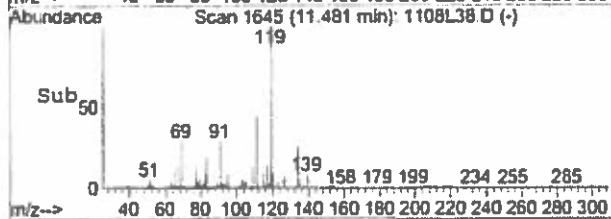
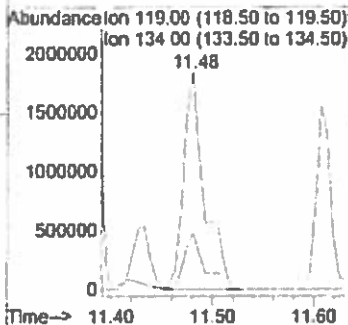
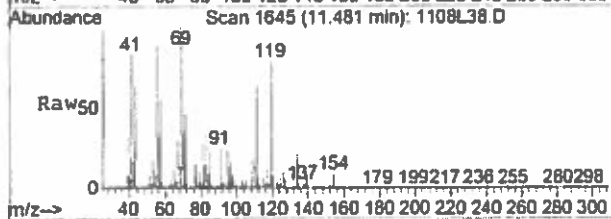
#83
B245 sec-Butylbenzene
Concen: 36.41 ppb
RT: 11.43 min Scan# 1637
Delta R.T. 0.02 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

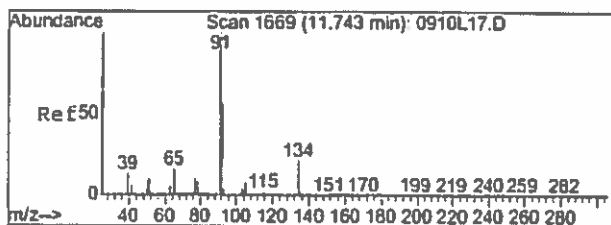
Tgt Ion: 105 Resp: 1795946
Ion Ratio Lower Upper
105 100
134 36.1 0.0 37.3



#84
B255 4-Isopropyltoluene
Concen: 69.56 ppb
RT: 11.48 min Scan# 1645
Delta R.T. -0.04 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

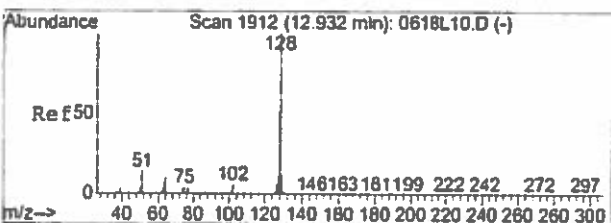
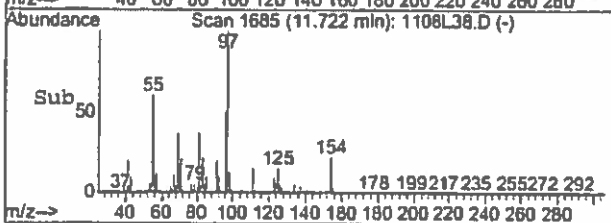
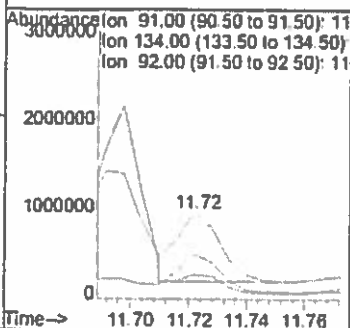
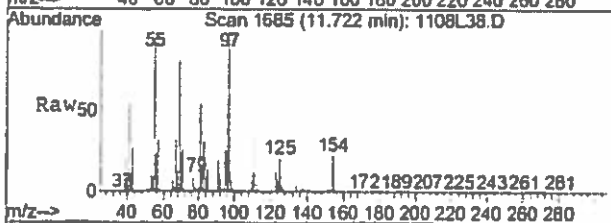
Tgt Ion: 119 Resp: 2587283
Ion Ratio Lower Upper
119 100
134 25.4 3.9 43.9





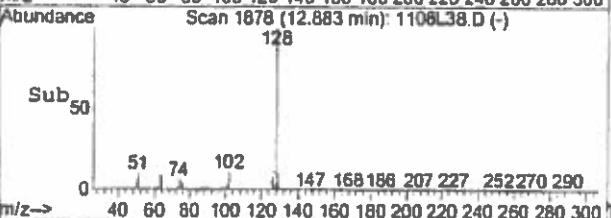
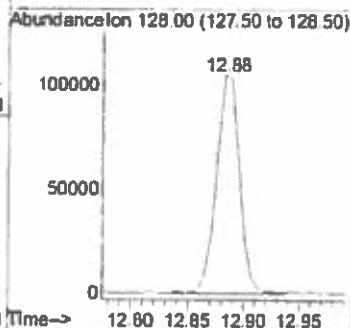
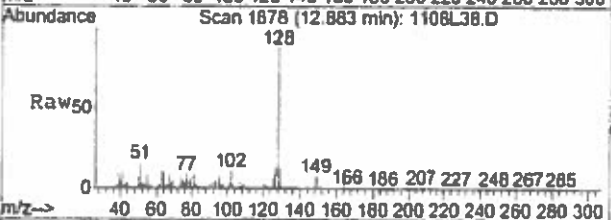
#89
B250 n-Butylbenzene
Concen: 19.28 ppb
RT: 11.72 min Scan# 1685
Delta R.T. -0.02 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

Tgt Ion: 91 Resp: 819776
Ion Ratio Lower Upper
91 100
134 0.0 3.5 43.5#
92 52.3 39.4 79.4



#93
B285 Naphthalene
Concen: 12.45 ppb
RT: 12.88 min Scan# 1878
Delta R.T. -0.02 min
Lab File: 1108L38.D
Acq: 8 Nov 2012 8:17 pm

Tgt Ion: 128 Resp: 151231





Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Chains of Custody

Sample Condition Upon Receipt

Urb. J. 111: 193-207, 1972
 C. & N. J. 111: 193-207
 C. & N. J. 111: 193-207

Project #: 20 146305

Carrier: ☐ Pace Courier ☐ Hackborth ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Color/Box Present (see COC)

Custody Seals Intact: ☐ Yes ☐ No

Thermometer Used: ☐ Therm Fisher IR 1
☐ Therm Fisher IR 2
☒ Therm Fisher IR 3

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature (see COC)

Temp should be above freezing to 6°C

Date and initials of person examining contents: NAK

Temp must be measured from Temperature Blank when present

Comments:

Temperature Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2
Chain of Custody Complete	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3
Chain of Custody Relinquished	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4
Sampler Name & Signature on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	9
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10
All containers received within manufacturer's precautionary and/or expiration dates.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11
All containers needing preservation have been checked (except VOA, coliform & Q&G).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12
All containers preservation checked found to be in compliance with EPA recommendation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13
	If No, was preservative added? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If added record lot no.. HNO3 _____ H2SO4 _____	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14
Headspace in VOA Vials (>6mm)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17
Price Trip Blank Lot # (if purchased):	N/A	18

Client Notification/ Resolution:**Person Contacted**

Date/Time:

Comments/ Resolution



Illinois Union Insurance Company
Chicago, Illinois

Premises Pollution Liability III Insurance Policy

Declarations

This Policy is issued by the stock insurance company listed above (herein called *the Insurer*).

THIS POLICY PROVIDES LIABILITY COVERAGE ON A CLAIMS-MADE AND REPORTED BASIS, WHICH COVERS ONLY CLAIMS FIRST MADE AGAINST THE INSURED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. THIS POLICY PROVIDES COVERAGE FOR REMEDIATION COSTS ON A DISCOVERED AND REPORTED BASIS, WHICH COVERS ONLY POLLUTION CONDITIONS FIRST DISCOVERED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. PLEASE READ THIS POLICY CAREFULLY. SOME OF THE PROVISIONS CONTAINED IN THIS POLICY RESTRICT COVERAGE, SPECIFY WHAT IS AND IS NOT COVERED AND DESIGNATE YOUR RIGHTS AND DUTIES. LEGAL DEFENSE EXPENSES ARE SUBJECT TO AND SHALL ERODE THE LIMITS OF LIABILITY AND ANY APPLICABLE SELF-INSURED RETENTION.

THE DECLARATIONS, TOGETHER WITH THE COMPLETED AND SIGNED APPLICATION, THIS POLICY, AND ANY ENDORSEMENTS OR SCHEDULES ATTACHED HERETO, CONSTITUTE THE INSURANCE POLICY.

Policy No.: PPL G24876871 004		Renewal of: PPL G24876871 003
Item 1.	First Named Insured:	CCL Industries Corporation
	Address:	15 Controls Drive Shelton, CT 06484

Item 2.	COVERAGE A – New Pollution Conditions Coverage	
a. Policy Period local time of the address shown in Item. 1	Policy Inception Date: March 31, 2015 12:01 A.M.	Policy Expiration Date: March 31, 2018 12:01 A.M.
b. Limits of Liability per "pollution condition"	\$ 1,000,000	
c. Limits of Liability aggregate all "pollution conditions"	\$ 1,000,000	
d. Self-Insured Retention per "pollution condition"	\$ 50,000	
<input type="checkbox"/> Coverage A not provided under this Policy (all fields in Item 2. are left blank)		

Item 3.	COVERAGE B – Pre-Existing Pollution Conditions Coverage	
a. Policy Period local time of the address shown in Item. 1	Policy Inception Date: March 31, 2015 12:01 A.M.	Policy Expiration Date: March 31, 2018 12:01 A.M.
b. Limits of Liability per "pollution condition"	\$ 1,000,000	
c. Limits of Liability aggregate all "pollution conditions"	\$ 1,000,000	
d. Self-Insured Retention per "pollution condition"	\$ 50,000	
<input type="checkbox"/> Coverage B not provided under this Policy (all fields in Item 3. are left blank)		

Item 4.	Limits of Liability: Total Policy Aggregate	\$ 1,000,000
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Item 5.	Premium: Total Premium:	<div style="background-color: black; width: 100px; height: 20px; margin-bottom: 10px;"></div> <div style="background-color: black; width: 100px; height: 20px; margin-bottom: 10px;"></div> <p>(This premium amount shall be deemed 100 % minimum-earned as of the first day of the Policy Period indicated in Item. 2.a and/or Item. 3.a., above., whichever is earlier.)</p>
Item 6.	Producer: Name & Address	MARSH USA INC 9830 COLONNADE BLVD SUITE 400 SAN ANTONIO, TX 78230

***All dollar amounts identified above are in *United States dollars*.**

Item 7.	a. Notice of Claim or Pollution Condition	b. All other Notices
Notices	Environmental Risk Claims Manager ACE USA Claims P.O. Box 5103 Scranton, PA 18505-0510 Fax: (866) 635-5687 First Notice Fax: (800) 951-4119 First Notice Email: CasualtyRiskEnvironmentalFirstNotice@acegroup.com	Environmental Risk Underwriting Officer ACE Environmental Risk P.O. Box 1000 436 Walnut Street – WA 07A Philadelphia, PA 19106
	24 Hour Emergency Response Hotline	1-888-310-9553

Item 8.	Covered Locations:	<ol style="list-style-type: none"> All US current and divested locations as per electronic spreadsheet file "EIL Schedule of Locations – Current & Divested 11-28-14.xls" provided by the insured and on file with Underwriters 28214 Beck Road, Wixom, Michigan, 48393 124-150 Horizon Drive, Verona, WI 53593 <p><input type="checkbox"/> if checked here, schedule of Covered Locations is designated via endorsement.</p>
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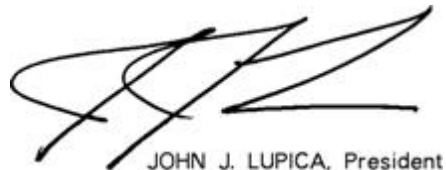
Endorsements and Notices Attached at Policy Issuance:

Endorsement Number:	Form Number:	Form Name:
1	PF-32461 (11/10)	Schedule of Named Insureds (Broad – Majority Owned Chain) Endorsement
2	PF-32352 (11/10)	Schedule of Additional Insureds (Broad – with By Contract) Endorsement (PPL III)
3	PF-30903 (09/10)	Jurisdiction and Venue/Choice of Law Amendatory (Deletion) Endorsement (PPL III/GPPL/PPL Port)
4	PF-32359 (11/10)	Asbestos Coverage (Bodily Injury & Property Damage Only) Endorsement (PPL III)
5	PF-32367 (11/10)	Automatic Acquisition and Due Diligence Endorsement (PPL III)
6	PF-32369 (11/10)	Business Interruption and Delay Expense Endorsement (PPL III)
7	PF-32390 (11/10)	Coverage Limitation and Reopener Endorsement (PPL III)
8	PF-32430 (11/10)	Basic Extended Reporting Period (90 Days) Endorsement (PPL III)
9	PF-32431 (11/10)	First-Party Property Value Diminution Coverage Endorsement (PPL III)
10	PF-32433 (11/10)	Fungi and Legionella Coverage (Sublimit) Endorsement (PPL III)
11	PF-32443a (02/13)	Lead-Based Paint Coverage (Bodily Injury & Property Damage Only) Endorsement (PPL III)
12	PF-32464 (11/10)	Non-Owned Disposal Sites Coverage (Blanket - New Waste and Historical Waste) Endorsement (PPL III)
13	PF-32477 (11/10)	Notice of Cancellation (120 Days) Endorsement (PPL III)
14	PF-32485 (11/10)	Other Insurance (Primary) Endorsement (PPL III)
15	PF-32494 (11/10)	Prior Claims Exclusionary (Itemized) Endorsement (PPL III)
16	PF-32527 (11/10)	Transportation Coverage Endorsement (PPL III)
17	PF-32528 (11/10)	Underground Storage Tank Coverage (Blanket) Endorsement (PPL III)
18	PF-32535 (11/10)	Waiver of Subrogation Endorsement (PPL III)
19	MANU (03/10)	Known Conditions Exclusion Amendatory Endorsement
20	MANU 1 (03/15)	Self-Insured Retention to Deductible Amendatory Endorsement
21	MANU 2 (03/15)	Property Damage Amendatory (Stigma) Endorsement
22	MANU 3 (03/15)	Responsible Person Amendatory Endorsement
23	MANU 5 (03/15)	Insured vs. Insured Amendatory Endorsement
24	MANU 6 (03/15)	Schedule of Covered Locations (Inadvertently Omitted Locations - New Conditions Only) Endorsement

Endorsement Number:	Form Number:	Form Name:
25	MANU 7 (03/15)	Pollution Condition Amendatory (EMF) Endorsement
26	MANU 8 (03/15)	Schedule of Additional Insureds (Vicarious Only) Endorsement
27	ALL-21101 (11/06)	Trade or Economic Sanctions Endorsement
28	XS-3U96f (02/06)	Service of Suit Endorsement
29	LD-5S23j (03/14)	Signatures
	TRIA24 (01/15)	Policyholder Disclosure Notice of Terrorism Insurance Coverage
	SL-17902 (04/10)	Pennsylvania Surplus Lines Notification
	ALL-20887 (10/06)	ACE Producer Compensation Practices & Policies
	IL P 001 01 04	U. S. Treasury Department's Office of Foreign Assets Control ("OFAC") Advisory Notice to Policyholders

IN WITNESS WHEREOF, the Insurer has caused this Policy to be countersigned by a duly authorized representative of the Insurer.

DATE: March 31, 2015
MO/DAY/YR



JOHN J. LUPICA, President

AUTHORIZED REPRESENTATIVE



Premises Pollution Liability III Insurance Policy

This Policy is issued by the stock insurance company identified in the Declarations (hereinafter *the Insurer*).

THIS POLICY PROVIDES LIABILITY COVERAGE ON A CLAIMS-MADE AND REPORTED BASIS, WHICH COVERS ONLY CLAIMS FIRST MADE AGAINST THE INSURED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. THIS POLICY PROVIDES COVERAGE FOR REMEDIATION COSTS ON A DISCOVERED AND REPORTED BASIS, WHICH COVERS ONLY POLLUTION CONDITIONS FIRST DISCOVERED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. PLEASE READ THIS POLICY CAREFULLY. SOME OF THE PROVISIONS CONTAINED IN THIS POLICY RESTRICT COVERAGE, SPECIFY WHAT IS AND IS NOT COVERED AND DESIGNATE YOUR RIGHTS AND DUTIES. LEGAL DEFENSE EXPENSES ARE SUBJECT TO AND SHALL ERODE THE LIMITS OF LIABILITY AND ANY APPLICABLE SELF-INSURED RETENTION.

Throughout this Policy the words *the Insurer* shall refer to the company providing this insurance. Other words and phrases that appear in quotation marks have special meanings and are defined in Section V., **DEFINITIONS**.

In consideration of the payment of the premium and in reliance upon all statements made in the Application to this Policy, including the information furnished in connection therewith, and subject to all terms, definitions, conditions, exclusions and limitations of this Policy, the Insurer agrees to provide insurance coverage to the "insured" as described herein.

I. INSURING AGREEMENTS

Solely to the extent that the Coverages, below, are identified on the Declarations to this Policy as being underwritten by the Insurer, the Insurer agrees to pay on behalf of the "insured" for:

A. NEW POLLUTION CONDITIONS (Coverage A.)

"Claims", "remediation costs", and associated "legal defense expenses", in excess of the "self-insured retention", arising out of a "pollution condition" on, at, under, or migrating from a "covered location", provided the "claim" is first made, or the "insured" first discovers such "pollution condition", during the "policy period". Any such discovery of a "pollution condition" must be reported to the Insurer, in writing, during the "policy period". Any such "claim" must be reported to the Insurer, in writing, during the "policy period" or any applicable "extended reporting period".

The coverage afforded pursuant to this Coverage **A.** only applies to "pollution conditions" that first commence, in their entirety, during the "policy period".

B. PRE-EXISTING POLLUTION CONDITIONS (Coverage B.)

"Claims", "remediation costs", and associated "legal defense expenses", in excess of the "self-insured retention", arising out of a "pollution condition" on, at, under, or migrating from a "covered location", provided the "claim" is first made, or the "insured" first discovers such "pollution condition", during the "policy period". Any such discovery of a "pollution condition" must be reported to the Insurer, in writing, during the "policy period". Any such "claim" must be reported to the Insurer, in writing, during the "policy period" or any applicable "extended reporting period".

The coverage afforded pursuant to this Coverage **B.** only applies to "pollution conditions" that first commenced, in whole or part, prior to the "policy period".

II. LIMITS OF LIABILITY AND SELF-INSURED RETENTION

- A.** It is expressly agreed that the Insurer's obligation to pay for any covered "claims", "remediation costs" or "legal defense expense" pursuant to this Policy shall attach to the Insurer only after the "first named insured" has paid, or has provided evidence to the Insurer that another "named insured" has paid, the full amount of the "self-insured retention" with respect to any covered "pollution condition". Under no circumstances shall the Insurer be liable to pay any amount within the "self-insured retention". In the event that the "first named insured" cannot provide satisfactory evidence that a "named insured" has paid the full amount of the "self-insured retention" with respect to any covered "pollution condition", the "first named insured" shall remain responsible to pay the "self-insured retention" before the Insurer's payment obligation pursuant to this Policy shall attach with respect to coverage sought by any "insured".
- B.** One "self-insured retention" shall apply to all "claims", "remediation costs" and "legal defense expenses" arising out of the same, continuous, repeated, or related "pollution condition".
- C.** With respect to Coverage **A.**, and subject to Subsections **D.**, **G.** and **H.**, below, the most the Insurer shall pay for all "claims", "remediation costs" and "legal defense expense" arising out of the same, continuous, repeated, or related "pollution condition" is the Limit of Liability identified in Item **2.b.** of the Declarations to this Policy.
- D.** With respect to Coverage **A.**, and subject to Subsection **C.**, above, and Subsections **G.** and **H.**, below, the Limit of Liability identified in Item **2.c.** of the Declarations to this Policy shall be the maximum liability of the Insurer pursuant to this Policy with respect to all "claims", "remediation costs" and "legal defense expense" for all "pollution conditions".
- E.** With respect to Coverage **B.**, and subject to Subsections **F.**, **G.** and **H.**, below, the most the Insurer shall pay for all "claims", "remediation costs" and "legal defense expense" arising out of the same, continuous, repeated, or related "pollution condition" is the Limit of Liability identified in Item **3.b.** of the Declarations to this Policy.
- F.** With respect to Coverage **B.**, and subject to Subsection **E.**, above, and Subsections **G.** and **H.**, below, the Limit of Liability identified in Item **3.c.** of the Declarations to this Policy shall be the maximum liability of the Insurer pursuant to this Policy with respect to all "claims", "remediation costs" and "legal defense expense" for all "pollution conditions".
- G.** Subject to Subsections **C.**, **D.**, **E.** and **F.**, above, the Total Policy Aggregate Limit of Liability identified in Item **4.** of the Declarations to this Policy shall be the maximum liability of the Insurer pursuant to this Policy with respect to all "claims", "remediation costs" and "legal defense expense" for all "pollution conditions" covered pursuant to Coverages **A.** and **B.**, and any Supplemental Coverages added by endorsement to this Policy, if any.
- H.** If the Insurer or an affiliate has issued pollution liability coverage afforded on a discovered and reported basis or claims-made and reported basis consistent with Coverages **A.** or **B.**, herein, in one or more policy periods, and a "pollution condition" is first discovered and reported to the Insurer, or a "claim" is first made and reported to the Insurer with respect to a "pollution condition", in accordance with the terms and conditions of this Policy, then:

 - 1.** Any continuous, repeated, or related "pollution condition" that is subsequently reported to the Insurer during later policy periods shall be deemed to be one "pollution condition" discovered during this "policy period"; and
 - 2.** All "claims" seeking "bodily injury", "property damage" or "remediation costs" arising out of:

 - a.** That same, continuous, repeated, or related "pollution condition" that was discovered during this "policy period"; or
 - b.** That same, continuous, repeated, or related "pollution condition" that was the subject of a "claim" first made and reported during this "policy period" or any applicable "extended reporting period",

shall be deemed to have been first made and reported during this "policy period" and no other policy shall respond.

III. DEFENSE AND SETTLEMENT

- A. The Insurer shall have the right and, subject to the “self-insured retention” obligation, the duty to defend the “insured” against a “claim” to which this insurance applies. The Insurer shall have no duty to defend the “insured” against any “claim” to which this insurance does not apply. The Insurer’s duty to defend the “insured” ends once the Limits of Liability are exhausted or are tendered into a court of applicable jurisdiction, or once the “insured” refuses a settlement offer as provided in Subsection E., below.
- B. The Insurer shall have the right to select legal counsel to represent the “insured” for the investigation, adjustment, and defense of any “claims” covered pursuant to this Policy. Selection of legal counsel by the Insurer shall not be done without the consent of the “insured”; such consent shall not be unreasonably withheld. “Legal defense expenses” incurred prior to the selection of legal counsel by the Insurer shall not be covered pursuant to this Policy, or credited against the “self-insured retention”.

In the event the “insured” is entitled by law to select independent counsel to defend itself at the Insurer’s expense, the attorney fees and all other litigation expenses the Insurer shall pay to that counsel are limited to the rates the Insurer actually pays to counsel that the Insurer normally retains in the ordinary course of business when defending “claims” or lawsuits of similar complexity in the jurisdiction where the “claim” arose or is being defended. In addition, the “insured” and the Insurer agree that the Insurer may exercise the right to require that such counsel: **1)** have certain minimum qualifications with respect to their competency, including experience in defending “claims” similar to those being asserted against the “insured”; **2)** maintain suitable errors and omissions insurance coverage; **3)** be located within a reasonable proximity to the jurisdiction of the “claim”; and **4)** agree in writing to respond in a timely manner to the Insurer’s requests for information regarding the “claim”. The “insured” may at anytime, by its signed consent, freely and fully waive its right to select independent counsel.

- C. The “insured” shall have the right and the duty to retain a qualified environmental consultant to perform any investigation and/or remediation of any “pollution condition” covered pursuant to this Policy. The “insured” must receive the written consent of the Insurer prior to the selection and retention of such consultant, except in the event of an “emergency response”. Any costs incurred prior to such consent shall not be covered pursuant to this Policy, or credited against the “self-insured retention”, except in the event of an “emergency response”.
- D. “Legal defense expenses” reduce the Limits of Liability identified in Items **2.**, **3.** and **4.** of the Declarations to this Policy and shall be applied to the “self-insured retention”.
- E. The Insurer shall present all settlement offers to the “insured”. If the Insurer recommends a settlement which is acceptable to a claimant, exceeds any applicable “self-insured retention”, is within the Limits of Liability, and does not impose any additional unreasonable burdens on the “insured”, and the “insured” refuses to consent to such settlement offer, then the Insurer’s duty to defend shall end. Thereafter, the “insured” shall defend such “claim” independently and at the “insured’s” own expense. The Insurer’s liability shall not exceed the amount for which the “claim” could have been settled if the Insurer’s recommendation had been accepted, exclusive of the “self-insured retention”.

IV. COVERAGE TERRITORY

The coverage afforded pursuant to this Policy shall only apply to “pollution conditions” located, and “claims” made, within the United States of America.

V. DEFINITIONS

- A. **“Additional insured”** means any person or entity specifically endorsed onto this Policy as an “additional insured”, if any. Such “additional insured” shall maintain only those rights that are specified by endorsement to this Policy.
- B. **“Bodily injury”** means physical injury, illness, disease, mental anguish, emotional distress, or shock, sustained by any person, including death resulting therefrom, and any prospective medical monitoring costs that are intended to confirm any such physical injury, illness or disease.

C. **“Certified industrial hygienist”** means a licensed professional, as established by the American Board of Industrial Hygiene, that is:

1. Mutually agreed upon by the Insurer and the “insured”; and
2. Qualified by knowledge, skill, education and training to perform an assessment of the fungal or bacterial ecology of a property, building systems and/or contents, prepare an investigation protocol, interpret the results and prepare a scope of work to remediate the site to an ordinary ambient indoor air ecology for similar indoor environments.

The Insurer may also exercise the right to require that such “certified industrial hygienist” have certain minimum qualifications with respect to their competency, including experience with similar “fungi” or *legionella pneumophila* remediation projects.

D. **“Claim”** means the written assertion of a legal right received by the “insured” from a third-party, including, but not limited to, a “government action”, suits or other actions alleging responsibility or liability on the part of the “insured” for “bodily injury”, “property damage” or “remediation costs” arising out of “pollution conditions” to which this insurance applies.

E. **“Contingent transportation”** means the movement of the “insured’s” waste or products by automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a “covered location” by a person or entity, other than an “insured”, engaged in the business of transporting property for hire, until such time as the waste or product is unloaded from the automobile, aircraft, watercraft, railcar or other conveyance.

F. **“Covered location”** means:

1. Any location specifically identified in Item 8. of the Declarations to this Policy;
2. Any location that meets the prerequisites to coverage identified in Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any; and
3. Any other location specifically scheduled as a “covered location” by endorsement attached to this Policy, if any.

G. **“Emergency response”** means actions taken and reasonable “remediation costs” incurred within seventy-two (72) hours following the discovery of a “pollution condition” by an “insured” in order to abate or respond to an imminent and substantial threat to human health or the environment arising out of such “pollution condition”.

H. **“Environmental indemnity obligations”** means an “insured’s” obligations to defend or indemnify a third-party with respect to a “pollution condition” to which this insurance otherwise applies, provided that such defense or indemnity obligation is explicitly included within a contract identified on the Schedule of Insured Contracts Endorsement attached to this Policy, if any.

I. **“Environmental law”** means any federal, state, provincial, municipal or other local law, statute, ordinance, rule, guidance document, regulation, and all amendments thereto, including state voluntary cleanup or risk-based corrective action guidance, governing the liability or responsibilities of the “insured” with respect to a “pollution condition”.

J. **“Extended reporting period”** means the additional period of time in which to report a “claim” first made against the “insured” during or subsequent to the end of the “policy period”.

K. **“First named insured”** means the person or entity as identified in Item 1. of the Declarations to this Policy. The “first named insured” is the party responsible for the payment of any premiums and the payment of, or evidencing payment of, any applicable “self-insured retention” amounts. The “first named insured” shall also serve as the sole agent on behalf of all “insureds” with respect to the provision and receipt of notices, including notice of cancellation or non-renewal, receipt and acceptance of any endorsements or any other changes to this Policy, return of any premium, assignment of any interest pursuant to this Policy, as well as the exercise of any applicable “extended reporting period”, unless any such responsibilities are otherwise designated by endorsement.

- L. **“Fungi”** means any type or form of fungus, including mold or mildew, and any mycotoxins, spores, scents, or byproducts produced or released by “fungi”.
- M. **“Government action”** means action taken or liability imposed by any federal, state, provincial, municipal or other local government agency or body acting pursuant to the authority of “environmental law”.
- N. **“Illicit abandonment”** means the intentional placement, abandonment or disposal of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, or waste materials, including “low-level radioactive waste”, “mixed waste” and medical, infectious and pathological wastes, on, at or into a “covered location” by a person or entity that:
 - 1. Is not an “insured”;
 - 2. Is not affiliated by common ownership with an “insured”; and
 - 3. Does not maintain, or has not maintained, an ownership or operational interest in the “covered location”.
- O. **“Insured”** means the “first named insured”, any “named insured”, any “additional insured”, and any past or present director or officer of, partner in, employee of, temporary or leased worker of, or, with respect to a limited liability company, a member of, any “insured” while acting within the scope of his or her duties as such.
- P. **“Legal defense expense”** means reasonable legal costs, charges, and expenses, including expert charges, incurred by the “insured” in the investigation, adjustment, or defense of “claims”.
- Q. **“Low-level radioactive waste”** means waste that is radioactive but not classified as the following: high-level waste (spent nuclear fuel or the highly radioactive waste produced if spent fuel is reprocessed), uranium milling residues, and waste with greater than specified quantities of elements heavier than uranium.
- R. **“Mixed waste”** means waste containing both radioactive and hazardous components as defined pursuant to United States law within the Atomic Energy Act and the Resource Conservation and Recovery Act as either may be amended.
- S. **“Named insured”** means any person or entity specifically endorsed onto this Policy as a “named insured”, if any. Such “named insured” shall maintain the same rights pursuant to this Policy as the “first named insured”, except for those rights specifically reserved to the “first named insured” that are identified in Subsection **K.**, above.
- T. **“Natural resource damage”** means injury to, destruction of, or loss of, including the resulting loss of value of, fish, wildlife, biota, land, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States of America (including the resources of the fishery conservation zone established by the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et. seq.)), any state or local government, or any Native American Tribe, or, if such resources are subject to a trust restriction on alienation, any members of any Native American Tribe, including the reasonable costs of assessing such injury, destruction or loss resulting therefrom.
- U. **“Non-owned disposal site”** means any disposal site or recycling facility not owned or operated by an “insured”, which receives, or has historically received, an “insured’s” waste.
- V. **“Policy period”** means:
 - 1. The period of time specifically identified in Item **2.a.** of the Declarations to this Policy for Coverage **A.** and/or Item **3.a.** of the Declarations to this Policy for Coverage **B.**;
 - 2. With respect to “covered locations” added pursuant to the Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, the period of time following the closing date of the acquisition transaction or the effective date of the lease or, as applicable, through the applicable

expiration date of the Policy identified in Item **2.a.** or **3.a.** of the Declarations to this Policy with respect to New Pollution Conditions Coverage and Pre-Existing Pollution Conditions Coverage, respectively; or

3. Any shorter period resulting from the cancellation of this Policy.

W. “Pollution condition” means:

1. The presence of “fungi” or *legionella pneumophila*;
2. “Illicit abandonment”; or
3. The discharge, dispersal, release, escape, migration or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, or waste materials, on, in, into, or upon land and structures thereupon, the atmosphere, surface water, or groundwater. For the purpose of this definition, waste materials include, but are not limited to, “low-level radioactive waste” and “mixed waste”.

X. “Property damage” means:

1. Physical injury to, or destruction of, tangible property of a third-party, including all resulting loss of use of that property;
2. Loss of use of tangible property of a third-party, that is not physically injured or destroyed;
3. Diminished value of tangible property owned by a third-party; or
4. “Natural resource damages”.

Y. “Remediation costs” means reasonable expenses incurred to investigate, quantify, monitor, mitigate, abate, remove, dispose, treat, neutralize, or immobilize “pollution conditions” to the extent required by “environmental law”. If no applicable laws exist that govern the remediation of “fungi” or *legionella pneumophila* in the jurisdiction of the “covered location”, necessary “remediation costs” may be established by securing the written professional recommendations of a “certified industrial hygienist” retained with the prior approval of the Insurer.

“Remediation costs” shall also include:

1. Reasonable legal cost, where such cost has been incurred by an “insured” with the written consent of the Insurer; and
2. Reasonable expenses required to restore, repair or replace real or personal property, to substantially the same condition it was in prior to being damaged during the course of responding to a “pollution condition”.

Z. “Responsible person” means any employee of an “insured” responsible for environmental affairs, control, or compliance at a “covered location”, and any officer or director of, or partner in, an “insured”.

AA. “Self-insured retention” means the dollar amount identified in Item **2.d. of the Declarations to this Policy for Coverage **A.** and/or Item **3.d.** of the Declarations to this Policy for Coverage **B.**, or as otherwise designated by endorsement to this Policy, if any.**

BB. “Terrorism” means activities against persons, organizations or property of any nature:

1. That involve the following or preparation for the following:
 - a. Use or threat of force or violence; or
 - b. Commission or threat of a dangerous act; or
 - c. Commission or threat of an act that interferes with or disrupts an electronic, communication, information, or mechanical system; and
2. When one or both of the following applies:

- a. The effect is to intimidate or coerce a government or the civilian population or any segment thereof, or to disrupt any segment of the economy; or
- b. It appears that the intent is to intimidate or coerce a government, or to further political, ideological, religious, social or economic objectives or to express (or express opposition to) a philosophy or ideology.

CC. "Underground storage tank" means any tank and associated piping and appurtenances connected thereto which tank has more than ten percent (10%) of its volume below ground. "Underground storage tank" does not mean a septic tank or oil/water separator.

DD. "War" means war, whether or not declared, civil war, martial law, insurrection, revolution, invasion, bombardment or any use of military force, usurped power or confiscation, nationalization or damage of property by any government, military or other authority.

VI. EXCLUSIONS

This insurance shall not apply to:

A. Asbestos

"Claims", "remediation costs" or "legal defense expenses", arising out of or related to asbestos or asbestos-containing materials.

This exclusion shall not apply to "remediation costs" arising out of asbestos or asbestos-containing materials discovered in soil or groundwater.

B. Contractual Liability

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to liability of others assumed by any "insured" through contract or agreement, except if the liability would have attached to the "insured" in the absence of such contract or agreement.

This exclusion shall not apply to "environmental indemnity obligations".

C. Divested Property

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to a "pollution condition" on, at, under or migrating from a "covered location" when such "pollution condition" first commenced after the "covered location" had been sold, abandoned, or given away by any "insured", or was condemned.

This exclusion shall not apply to Coverage B.

D. Employers Liability

"Claims" or "legal defense expenses" arising out of or related to "bodily injury" to:

1. Any "insured" or any employee of its parent corporation, subsidiary or affiliate:
 - a. Arising out of, or in the course of, employment by any "insured", its parent corporation, subsidiary or affiliate; or
 - b. Performing duties related to the conduct of the business of any "insured", its parent corporation, subsidiary, or affiliate.
2. The spouse, child, parent, brother or sister of any "insured" or employee of its parent corporation, subsidiary or affiliate as a consequence of Paragraph 1., above.

This exclusion applies:

1. Whether an "insured" may be liable as an employer or in any other capacity; and
2. To any obligation to share damages with or repay someone else who must pay damages because of such "bodily injury".

E. Fines and Penalties

Payment of criminal fines, criminal penalties, punitive, exemplary or multiplied damages, or any associated “claims” seeking exclusively injunctive relief in addition to such fines, penalties or damages.

This exclusion also applies to any “legal defense expense” associated with such fines and penalties.

This exclusion shall not apply to punitive or exemplary damages where such coverage is insurable by law.

F. First-Party Property Damage

“Claims” or “legal defense expenses” arising out of or related to damage to real or personal property owned by, leased to, loaned to, or rented by any “insured”, or otherwise in the care, custody, or control of any “insured”.

This exclusion shall not apply to “remediation costs”.

G. Fraud or Misrepresentation

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to:

1. Fraudulent acts or material misrepresentations on the part of the “first named insured” made:
 - a. Within the Application to this Policy; or
 - b. During the Application or underwriting process prior to the inception date identified in Item **2.a.** or **3.a.** of the Declarations to this Policy, as applicable, which would have affected the Insurer’s decision to either issue this Policy, or issue this Policy and its endorsements pursuant to the financial terms identified in the Declarations to this Policy; or
2. Fraudulent acts or material misrepresentations on the part of any “responsible person” during the “policy period”.

H. Insured’s Internal Expenses

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to expenses incurred by any “insured” for services performed by its salaried staff and any employees.

This exclusion shall not apply to “emergency response” or any costs, charges or expenses incurred with the prior written approval of the Insurer at its sole discretion.

I. Insured vs. Insured

“Claims” made by any “insured” against any other “insured”.

J. Intentional Non-Compliance

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to the intentional disregard of, or knowing, willful, or deliberate non-compliance with, any law, statute, regulation, administrative complaint, notice of violation, notice letter, instruction of any governmental agency or body, or executive, judicial or administrative order by any “responsible person”.

K. Known Conditions

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to “pollution conditions” in existence and reported to a “responsible person”:

1. Prior to the “policy period”; or,
2. With respect to “covered locations” acquired or leased by a “named insured” and added to the Policy during the “policy period” pursuant to an Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, prior to the closing date of the acquisition or effective date of the lease of such “covered locations”,

including any “pollution conditions” discovered during the normal course of further investigation or remediation of such reported “pollution conditions”.

This exclusion shall not apply to:

1. “Pollution conditions” specifically referenced in, or identified in documents listed on, the Schedule of Known Conditions Endorsement attached to this Policy, if any; or
2. “Pollution conditions” that have been reported to the “responsible person” as not being actionable pursuant to “environmental law” in any Phase I or Phase II Environmental Site Assessment report (or its functional equivalent) specifically prepared for a “named insured” by a qualified environmental consultant. To the extent that the qualified consultant’s actionability determination is premised, in whole or in part, on the use of institutional or engineering controls in effect at a “covered location”, any coverage afforded pursuant to this paragraph shall be contingent upon:
 - a. The continued maintenance of said engineering controls; and
 - b. The continued use of the property in a manner consistent with the consultant’s reported assumptions,
during the “policy period”.

L. Lead-Based Paint

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to lead-based paint.

This exclusion shall not apply to “remediation costs” arising out of lead-based paint discovered in soil or groundwater.

M. Material Change in Risk

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to a change in the use or operations at a “covered location” that materially increases the likelihood or severity of a “pollution condition” or “claim” from the intended uses or operations identified:

1. By the “first named insured” for the Insurer in the Application and accompanying underwriting materials provided prior to the inception date identified in Item **2.a.** or **3.a.** of the Declarations to this Policy, as applicable; or
2. With respect to “covered locations” added to the Policy pursuant to the Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, as part of the due diligence materials and supplemental underwriting materials provided to the Insurer as part of the notice required pursuant to that endorsement.

This exclusion shall only apply to the “covered location” associated with the change in use or operations and shall not limit coverage for other “covered locations” to which this insurance applies.

N. Naturally Occurring Materials

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to the presence or removal of naturally occurring materials.

This exclusion shall not apply in those circumstances where naturally occurring substances are present at a “covered location” as a result of human activities or human processes.

O. Non-Owned Disposal Sites

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to “pollution conditions” on, at, under or migrating from a “non-owned disposal site”.

This exclusion shall not apply to any “non-owned disposal site” specifically identified on a Schedule of Non-Owned Disposal Sites Endorsement attached to this Policy, if any.

P. Underground Storage Tanks

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to "pollution conditions" emanating from an "underground storage tank" located at a "covered location", when the existence of such "underground storage tank" was known to a "responsible person" prior to the "policy period"; and

1. The "underground storage tank" is not identified on the Schedule of Insured Underground Storage Tanks Endorsement attached to this Policy, if any; or
2. The "underground storage tank" has been closed or removed, and is not identified on the Schedule of Known Conditions Endorsement attached to this Policy, if any.

Q. Vehicles

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to "pollution conditions" resulting from the use, maintenance or operation, including loading or unloading, of an automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a "covered location".

This exclusion shall not apply to "contingent transportation" if such coverage is added to this Policy by endorsement.

R. War or Terrorism

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to "pollution conditions" attributable, whether directly or indirectly, to any acts that involve, or that involve preparation for, "war" or "terrorism" regardless of any other cause or event that contributes concurrently or in any sequence to the injury or damage.

VII. REPORTING AND COOPERATION

- A.** The "insured" must see to it that the Insurer receives written notice of any "claim" or "pollution condition", as soon as practicable, at the address identified in Item 7.a. of the Declarations to this Policy. Notice should include reasonably detailed information as to:

1. The identity of the "insured", including contact information for an appropriate person to contact regarding the handling of the "claim" or "pollution condition";
2. The identity of the "covered location";
3. The nature of the "claim" or "pollution condition"; and
4. Any steps undertaken by the "insured" to respond to the "claim" or "pollution condition".

In the event of a "pollution condition", the "insured" must also take all reasonable measures to provide immediate verbal notice to the Insurer.

- B.** The "insured" must:

1. As soon as practicable, send the Insurer copies of any demands, notices, summonses or legal papers received in connection with any "claim";
2. Authorize the Insurer to obtain records and other information;
3. Cooperate with the Insurer in the investigation, settlement or defense of the "claim";
4. Assist the Insurer, upon the Insurer's request, in the enforcement of any right against any person or organization which may be liable to the "insured" because of "bodily injury", "property damage", "remediation costs" or "legal defense expense" to which this Policy may apply; and
5. Provide the Insurer with such information and cooperation as it may reasonably require.

- C.** No "insured" shall make or authorize an admission of liability or attempt to settle or otherwise dispose of any "claim" without the written consent of the Insurer. Nor shall any "insured" retain any consultants or

incur any “remediation costs” without the prior express written consent of the Insurer, except in the event of an “emergency response”.

- D. Upon the discovery of a “pollution condition”, the “insured” shall make every attempt to mitigate any loss and comply with applicable “environmental law”. The Insurer shall have the right, but not the duty, to mitigate such “pollution conditions” if, in the sole judgment of the Insurer, the “insured” fails to take reasonable steps to do so. In that event, any “remediation costs” incurred by the Insurer shall be deemed incurred by the “insured”, and shall be subject to the “self-insured retention” and Limits of Liability identified in the Declarations to this Policy.

VIII. EXTENDED REPORTING PERIOD

- A. The “first named insured” shall be entitled to a basic “extended reporting period”, and may purchase an optional supplemental “extended reporting period”, following Cancellation, as described in Subsection A., Paragraph 1. of Section IX., **GENERAL CONDITIONS**, or nonrenewal.
- B. “Extended reporting periods” shall not reinstate or increase any of the Limits of Liability. “Extended reporting periods” shall not extend the “policy period” or change the scope of coverage provided. A “claim” first made against an “insured” and reported to the Insurer within the basic “extended reporting period” or supplemental “extended reporting period”, whichever is applicable, shall be deemed to have been made and reported on the last day of the “policy period”.
- C. Provided the “first named insured” has not purchased any other insurance to replace this Policy, the “first named insured” shall have a sixty (60) day basic “extended reporting period” without additional charge.
- D. Provided the “first named insured” has not purchased any other insurance to replace this Policy, the “first named insured” shall also be entitled to purchase a supplemental “extended reporting period” of up to thirty-four (34) months for not more than two hundred percent (200%) of the full premium identified in Item 5. of the Declarations to this Policy, and any additional premiums resulting from coverage added during the “policy period”. Such supplemental “extended reporting period” starts when the basic “extended reporting period” ends. The Insurer shall issue an endorsement providing a supplemental “extended reporting period” provided that the “first named insured”:
 - 1. Makes a written request, to the address identified in Item 7.b. of the Declarations to this Policy, for such endorsement which the Insurer receives prior to the expiration of the “policy period”; and
 - 2. Pays the additional premium when due. If that additional premium is paid when due, the supplemental “extended reporting period” may not be cancelled, provided that all other terms and conditions of the Policy are met.

IX. GENERAL CONDITIONS

A. Cancellation

- 1. This Policy may be cancelled only by the “first named insured”, or through the “first named insured’s” agent, by mailing to the Insurer at the address identified in Item 7.b. of the Declarations to this Policy, written notice stating when such cancellation shall be effective.
- 2. This Policy may be cancelled by the Insurer for the following reasons:
 - a. Non-payment of premium; or
 - b. Fraud or material misrepresentation on the part of any “insured,by mailing to the “first named insured” at the “first named insured’s” last known address, written notice stating when, not less than sixty (60) days thereafter, fifteen (15) days if cancellation is for non-payment of any unpaid portion of the premium, such cancellation shall be effective. The mailing of notice shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall be the end of the “policy period”.

Subparagraph **2.b.**, herein, shall apply only to that “insured” that engages in the fraud or misrepresentation. This exception shall not apply to any “insured” who is a parent corporation, subsidiary, employer of, or otherwise affiliated by ownership with, such “insured”.

3. In the event of cancellation, the premium percentage identified in Item **5.** of the Declarations to this Policy shall be the minimum-earned premium upon the inception date identified in Item **2.a.** of the Declarations to this Policy. Thereafter, the remaining unearned premium, if any, shall be deemed earned by the Insurer on a *pro rata* basis over the remainder of the “policy period”. Any unearned premium amounts due the “first named insured” upon cancellation of this Policy shall be calculated on a *pro rata* basis and refunded within thirty (30) days of the effective date of cancellation.

B. Inspection and Audit

To the extent of the “insured’s” ability to provide such access, and with reasonable notice to the “insured”, the Insurer shall be permitted, but not obligated, to inspect and sample the “covered locations”. The “insured” shall have the concurrent right to collect split samples. Neither the Insurer’s right to make inspections, the making of said inspections, nor any report thereon shall constitute an undertaking, on behalf of or for the benefit of the “insured” or others, to determine or warrant that such property or operations are safe or in compliance with “environmental law”, or any other law.

The Insurer may examine and audit the “insured’s” books and records during this “policy period” and extensions thereof and within three (3) years after the final termination of this Policy.

C. Legal Action Against the Insurer

No person or organization other than an “insured” has a right pursuant to this Policy:

1. To join the Insurer as a party or otherwise bring the Insurer into a suit against any “insured”; or
2. To sue the Insurer in connection with this insurance unless all of the Policy terms have been fully complied with.

D. Bankruptcy

The insolvency or bankruptcy of any “insured” or any “insured’s” estate shall not relieve the Insurer of its obligations pursuant to this Policy. However, any such insolvency or bankruptcy of the “insured” or the “insured’s” estate shall not relieve the “insured” of its “self-insured retention” obligations pursuant to this Policy. This insurance shall not replace any other insurance to which this Policy is excess, nor shall this Policy drop down to be primary, in the event of the insolvency or bankruptcy of any underlying insurer.

E. Subrogation

In the event of any payment pursuant to this Policy by the Insurer, the Insurer shall be subrogated to all of the rights of recovery against any person or organization, and the “insured” shall execute and deliver instruments and papers and do whatever else is necessary to secure such rights. The “insureds” shall do nothing to prejudice such rights. Any recovery as a result of subrogation proceedings arising pursuant to this Policy shall accrue first to the “insureds” to the extent of any payments in excess of the limit of coverage; then to the Insurer to the extent of its payment pursuant to the Policy; and then to the “insured” to the extent of the “self-insured retention”. Expenses incurred in such subrogation proceedings shall be apportioned among the interested parties in the recovery in the proportion that each interested party’s share in the recovery bears to the total recovery.

F. Representations

By accepting this Policy, the “first named insured” agrees that:

1. The statements in the Declarations, schedules and endorsements to, and Application for, this Policy are accurate and complete;

2. Those statements and representations constitute warranties that the “first named insured” made to the Insurer; and
3. This Policy has been issued in reliance upon the “first named insured’s” warranties.

G. Separation of Insureds

Except with respect to the Limits of Liability, Cancellation condition **2.a.**, above, the Fraud or Misrepresentation Exclusion, the Insured vs. Insured Exclusion, the Intentional Non-Compliance Exclusion, the Known Conditions Exclusion, the Material Change in Risk Exclusion, the Underground Storage Tanks Exclusion, and any obligations specifically assigned to the “first named insured”, this Policy applies:

1. As if each “named insured” were the only “insured”; and
2. Separately to each “named insured” against whom a “claim” is made.

H. Other Insurance

If other valid and collectible insurance is available to any “insured” covering a loss also covered by this Policy, other than a policy that is specifically written to apply in excess of this Policy, the insurance afforded by this Policy shall apply in excess of and shall not contribute with such other insurance.

I. Jurisdiction and Venue

It is agreed that in the event of the failure of the Insurer to pay any amount claimed to be due hereunder, the Insurer and the “insured” shall submit to the exclusive jurisdiction of the State of New York and shall comply with all requirements necessary to give such court jurisdiction. Nothing in this clause constitutes or should be understood to constitute a waiver of the Insurer’s right to remove an action to a United States District Court.

J. Choice of Law

All matters arising hereunder, including questions relating to the validity, interpretation, performance, and enforcement of this Policy, and the rights, duties and obligations hereunder, shall be determined in accordance with the law and practices of the State of New York.

K. Changes and Assignment

Notice to or knowledge possessed by any person shall not effect waiver or change in any part of this Policy or estop the Insurer from asserting any right pursuant to the terms of this Policy. The terms, definitions, conditions, exclusions and limitations of this Policy shall not be waived or changed, and no assignment of any interest in this Policy shall bind the Insurer, except as provided by endorsement and attached to this Policy.

L. Headings

The descriptions in the headings and sub-headings of this Policy are inserted solely for convenience and do not constitute any part of the terms or conditions hereof.

M. Consent

Where the consent of the Insurer, or an “insured”, is required pursuant to this Policy, such consent shall not be unreasonably withheld, delayed, conditioned, or denied.

SCHEDULE OF NAMED INSURED (BROAD – MAJORITY OWNED CHAIN) ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 1
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

The persons or entities within the scope of the description contained in the Schedule of Named Insureds, below, are “named insureds” pursuant to this Policy.

Schedule of Named Insureds

1. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, other than joint ventures and general partnerships, as now or may hereafter exist during the “policy period”, in which the “first named insured”, itself, or through a direct chain of underlying majority-owned operating subsidiary corporations, limited partnerships, limited liability partnerships, or limited liability companies, maintains at least a fifty percent (50%) ownership interest (hereinafter Majority-Owned Affiliates); and
2. All joint ventures or general partnerships, as now or may hereafter exist during the “policy period”, to which the “first named insured”, itself, or one of its Majority-Owned Affiliates, is a party and maintains at least a fifty percent (50%) ownership interest, but only to the extent of the “first named insured’s” or Majority-Owned Affiliates’ legal responsibility for the liabilities of such joint venture or general partnership.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

**SCHEDULE OF ADDITIONAL INSUREDS (BROAD – WITH BY CONTRACT)
ENDORSEMENT (PPL III)**

Named Insured CCL Industries Corporation			Endorsement Number 2
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

The persons or entities within the scope of the description contained in the Schedule of Additional Insureds, below, are “additional insureds” pursuant to this Policy, but solely with respect to their vicarious liability arising out of any “named insured’s” direct liability for a “pollution condition” on, at under or migrating from a “covered location” to which this insurance applies.

Schedule of Additional Insureds

1. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, other than joint ventures and general partnerships, as now or may hereinafter exist during the “policy period”, in which a “named insured” maintains an ownership interest;
2. All joint ventures or general partnerships, as now or may hereinafter exist during the “policy period”, to which a “named insured” is a party, as now or may hereinafter exist during the “policy period”, but only to the extent of the “named insured’s” legal responsibility for the vicarious liability of such joint venture or general partnership ; and
3. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, as now or may hereinafter exist during the “policy period”, but solely to the extent that: **a)** a “named insured” is required by contractual agreement with such entity to provide such coverage; and **b)** the “named insured’s” contractual agreement with such entity was executed and effective prior to any related “claim”.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

**JURISDICTION AND VENUE/CHOICE OF LAW AMENDATORY (DELETION)
ENDORSEMENT (PPL III/GPPL/PPL PORT)**

Named Insured CCL Industries Corporation			Endorsement Number 3
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

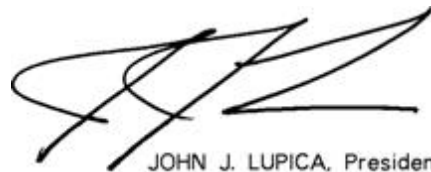
Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsections **I., Jurisdiction and Venue**, and **J., Choice of Law**, are hereby deleted in their entirety.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

**ASBESTOS COVERAGE (BODILY INJURY & PROPERTY DAMAGE ONLY)
ENDORSEMENT (PPL III)**

Named Insured CCL Industries Corporation			Endorsement Number 4
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, Subsection **A., Asbestos**, of this Policy is hereby deleted in its entirety and replaced with the following:

A. Asbestos

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to asbestos or asbestos-containing materials.

This exclusion shall not apply to:

1. Third-party "claims" for "bodily injury" and associated "legal defense expenses" arising out of asbestos or asbestos-containing materials;
2. Third-party, non-governmental "claims" for "property damage" and associated "legal defense expenses" arising out of asbestos or asbestos-containing materials; and
3. "Remediation costs" arising out of asbestos or asbestos-containing materials discovered in soil or groundwater.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

AUTOMATIC ACQUISITION AND DUE DILIGENCE ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 5
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

I. Section **IX., GENERAL CONDITIONS**, of this Policy is hereby amended by addition of the following:

Automatic Acquisition and Due Diligence

1. It is understood and agreed that, for an additional premium amount, any property acquired or leased by a “named insured” during the “policy period” shall be added to the Policy as a “covered location” upon the closing date of such acquisition or the effective date of such lease, respectively; provided that the Insurer receives written notice of the property acquisition or lease within ninety (90) days of the closing date of such acquisition or the effective date of such lease, and the “named insured” completes the following environmental due diligence assessment of the property prior to such acquisition or lease:
 - a. The “named insured” commissions and receives a Phase I Environmental Site Assessment report on the property that is performed by a qualified environmental consultant in accordance with the ASTM Standard for Environmental Site Assessments: Phase I Environmental Site Assessment Process in effect as of the inception of this Policy; or
 - b. The “named insured” receives a Phase I Environmental Site Assessment report on the property that has been conducted by a qualified environmental consultant for a third-party, provided that the assessment and related report are prepared in accordance with the ASTM Standard for Environmental Site Assessments: Phase I Environmental Site Assessment Process in effect as of the inception of this Policy, and that the consultant responsible for the reports has provided the “named insured” with written confirmation that the “named insured”, as applicable, is entitled to rely on the conclusions of the reports as if the assessment had been performed on its behalf.
2. If the Phase I Environmental Site Assessment does not identify any Recognized Environmental Conditions, as defined by the ASTM Standard for Environmental Site Assessments: Phase I Environmental Site Assessment Process in effect as of the inception of this Policy (hereinafter RECs), the property shall automatically be added to the Policy as an additional “covered location” effective on the date the “named insured” acquired the property or the effective date of the “named insured’s” lease agreement.
3. If the Phase I Environmental Site Assessment identifies any RECs, then, before the property may be added to the Policy as a “covered location”, the “named insured” must complete a Phase II Environmental Site Assessment. Thereafter, the Insurer shall have thirty (30) days to review and approve the Phase II Environmental Assessment report. Said approval shall not be unreasonably withheld, but the Insurer reserves the right to limit coverage with respect to any RECs identified at the property, and any “pollution conditions” identified during further investigation of such RECs. Upon such approval, the Insurer shall provide a written endorsement to the “first named insured” confirming the effective date that the property has been added to the Policy as an additional “covered location”, and describing the extent of the

coverage being afforded with respect to the RECs and associated "pollution conditions" identified at the property.


4. Additional premium for "covered locations" added to this Policy pursuant to Paragraphs 1. though 3., above, shall be calculated on a *pro rata* basis using the following rates:

Additional Premium Schedule

Acquired Property Type	Additional Premium
Industrial Sites	
Commercial	
Warehouses	
Offices	

In the event a property of a type not described in the Additional Premium Schedule, above, is acquired or leased by a "named insured", the terms and conditions of this Subsection shall not apply.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

BUSINESS INTERRUPTION AND DELAY EXPENSE ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 6
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

- I. Section I., **INSURING AGREEMENTS**, of this Policy is amended by addition of the following:

SUPPLEMENTAL COVERAGE – BUSINESS INTERRUPTION

Actual “business interruption loss” incurred by an “insured” during a “period of interruption” in excess of the Deductible Period.

The coverage afforded pursuant to this Supplemental Coverage only applies to “business interruption loss” that:

1. Is directly attributable to a “covered pollution condition”; and
2. Is reported to the Insurer, in writing, as soon as practicable, and during the “policy period”.

- II. The amount the Insurer shall pay for “business interruption loss” pursuant to this Supplemental Coverage is limited by the following Sublimit of Liability and Deductible Period:

Sublimit of Liability: \$ 1,000,000

Deductible Period: 3 days

The Sublimit of Liability identified above shall be the maximum amount the Insurer shall pay for all “business interruption loss” arising out of all “covered pollution conditions”. This Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

The Insurer shall have no obligation to pay any “business interruption loss” incurred during the Deductible Period.

- III. Section V., **DEFINITIONS**, of this Policy is amended by addition of the following:

“Business income” means:

1. Net profit or loss, before income taxes, including “rental income” from tenants, that would have been realized had there been no “business interruption”;
2. The “insured’s” continuing operating and payroll expense (excluding payroll expense of officers, executives, department managers and contract employees);
3. Costs incurred by the “insured” as rent for temporary premises when a portion of a “covered location” becomes untenable due to a “covered pollution condition” and temporary premises are required to continue the “insured’s” operations. Such rental costs cannot exceed the fair rental value of the untenable portion of the “covered location”.

“Business interruption” means necessary partial or complete suspension of the “insured’s” operations at a “covered location” arising from a “covered pollution condition”.

“Business interruption loss” means:

1. “Business income”;
2. “Extra expense; and
3. “Delay expense”.

“Covered pollution condition” means a “pollution condition” on, at or under a “covered location” for which coverage is otherwise afforded pursuant to this Policy pursuant to Coverages **A.** or **B.** only, for “remediation costs” resulting from the first-party discovery of such “pollution condition”. The coverage afforded pursuant to this Endorsement shall not apply to any “business interruption loss” arising from or related to any “pollution conditions” for which coverage for “remediation costs” resulting from the first-party discovery of such “pollution conditions” is excluded pursuant to this Policy.

“Delay expense” means for a “covered location” under development, where a “covered pollution condition” causes a delay in the completion or development, any of the following expenses incurred shall be afforded coverage:

1. Additional interest on money the “insured” has borrowed to finance the construction, development, or remediation of a project at a “covered location”;
2. Additional realty taxes and other assessments;
3. Additional advertising or promotional expense;
4. Additional expenses incurred resulting from the renegotiation of leases, including associated usual and customary legal representation expense; and
5. Additional engineering, architectural, and consulting fees.

“Extra expense” means costs incurred by the “insured” due to a “covered pollution condition”, that are necessary to avoid or mitigate any “business interruption”. Such costs must be incurred to actually minimize the amount of foregone “business income” that would otherwise be covered pursuant to this Endorsement.

“Period of interruption” means the length of time commencing with the date that operations are necessarily suspended at a “covered location” as a result of “covered pollution conditions”.

“Rental income” means the actual rental fees lost as a result of a “suspension” of a rented “covered location”.

“Suspension” means that part of or all of a rented “covered location” is rendered untenable for the purposes identified to the Insurer at the inception of the Policy, due to “covered pollution conditions”.

IV. The following Conditions and Limitations shall apply to any coverage afforded pursuant to this Endorsement:

- A.** If such “business interruption” delays the start of the “insured’s” operations, then the “period of interruption” shall begin on the date the operations would have begun if the “covered pollution condition” had not resulted in “business interruption”.
- B.** The “period of interruption” shall end on the date that the subject “covered pollution condition” has been remedied to the point at which the “insured’s” normal operations could reasonably be restored. Coverage shall not be afforded for any “covered pollution condition” resulting in loss of “business income” as a result of unfavorable business conditions caused by the impact of the “covered pollution condition”.
- C.** If the Insurer and the “insured” disagree on the amount of “business income” or any other amount that is or may be covered pursuant to this Endorsement, either may make written demand for an appraisal of the loss. In this event, each party shall select a competent and impartial appraiser. If necessary,

the two appraisers shall select an umpire. If they cannot agree, either may request that selection be made by a judge of a court having jurisdiction. The appraisers shall state separately the amount of "business income" or any other amount. If they fail to agree to a resolution, they shall submit their differences to the umpire. A decision agreed to by the appraisers, of the umpire, if necessary, shall be binding upon both parties. Each party shall:

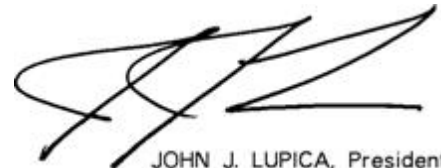
1. Pay its chosen appraiser; and
2. Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, the Insurer shall still retain all of its rights pursuant to the Policy to deny all or a portion of the claim.

V. Section VI., EXCLUSIONS, of this Policy is hereby amended by addition of the following:

This insurance also does not apply to "business interruption loss" arising out of or related to any of the individually excluded exposures identified above.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

COVERAGE LIMITATION AND REOPENER ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 7
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

I. COVERAGE LIMITATION:

- ☐ "emergency response costs"; *
- ☐ "business interruption loss"; *
- ☒ "diminution in value"; *
- ☐ "rental income"; *
- ☐ "catastrophe management costs"; *
- ☒ "remediation costs";
- ☐ "property damage";
- ☐ "bodily injury",

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

Coverage is not afforded pursuant to this Policy for any of the exposures indicated above, including any associated "legal defense expenses", with respect to those specific "pollution conditions" identified in the Schedule of Limited Coverage, below.

II. RE-OPENER OF COVERAGE:

In the event that "closure" is achieved with respect any of the "pollution conditions" identified in Schedule of Limited Coverage, below, then coverage limitations set forth in Section I., above, may be deleted with respect to those "pollution conditions" that achieve such "closure". The coverage limitations identified in Section I., above, can only be deleted by endorsement to this Policy issued by the Insurer.

III. For the purposes of this Endorsement, "closure" shall mean that the "insured" obtains a written No Further Action determination, or otherwise achieves closure in accordance with the regulatory requirements applicable to the subject "pollution conditions", which has been confirmed in writing by the regulatory agency or authority with jurisdiction over the "pollution conditions".

If such "closure" is contingent upon: 1) certain additional actions with respect to the subject "pollution conditions" in order to be effective; or 2) on the use of institutional or engineering controls in effect at a "covered location", then any such additional actions must be completed in order for coverage to be effective pursuant to this Endorsement, and such coverage shall be contingent upon the continued maintenance of said engineering controls and the continued use of the "covered location" in a manner consistent with said institutional control, as applicable, during the "policy period" or any "extended reporting period".

SCHEDULE OF LIMITED COVERAGE

1. **1 Hegeler Lane Danville, IL:** tetrachloroethene, bromodichloromethane, chloroform, 1,1,1-trichloroethane; 1,1-dichloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; trichloroethene; trichlorofluoromethane; vinyl chloride; chloroethane in groundwater
2. **35 Martin Drive, Cumberland, Rhode Island:** 1,1-dichloroethene; 1,2-dichloroethene; methylene chloride; tetrachloroethene; 1,1,1-trichloroethene; ethylbenzene; styrene, toluene, xylenes in soils
3. **35 Martin Drive, Cumberland, Rhode Island:** 1,1-dichloroethene; 1,2-dichloroethene; methylene chloride; tetrachloroethene; 1,1,2-trichloroethene; trichloroethene; benzene; vinyl chloride; bis(2ethylhexyl) phthalate, chlordane; acetone, cadmium, copper, arsenic in groundwater

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

BASIC EXTENDED REPORTING PERIOD (90 DAYS) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 8
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

Section **VIII.**, **EXTENDED REPORTING PERIOD**, Subsections **C.** and **D.**, of this Policy are hereby deleted in their entirety and replaced with the following:

- C.** Provided the “first named insured” has not purchased any other insurance to replace this Policy, the “first named insured” shall have a ninety (90) day basic “extended reporting period” without additional charge.
- D.** Provided the “first named insured” has not purchased any other insurance to replace this Policy, the “first named insured” shall also be entitled to purchase a supplemental “extended reporting period” of up to thirty-three (33) months for not more than two hundred percent (200%) of the full premium identified in Item **5.** of the Declarations to this Policy, and any additional premiums resulting from coverage added during the “policy period”. Such supplemental “extended reporting period” starts when the basic “extended reporting period” ends. The Insurer shall issue an endorsement providing a supplemental “extended reporting period” provided that the “first named insured”:
 - 1.** Makes a written request, to the address identified in Item **7.b.** of the Declarations to this Policy, for such endorsement which the Insurer receives prior to the expiration of the “policy period”; and
 - 2.** Pays the additional premium when due. If that additional premium is paid when due, the supplemental “extended reporting period” may not be cancelled, provided that all other terms and conditions of the Policy are met.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

FIRST-PARTY PROPERTY VALUE DIMINUTION COVERAGE ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 9
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

I. Section I., INSURING AGREEMENTS, of this Policy is hereby amended by addition of the following:

SUPPLEMENTAL COVERAGE

Actual “diminution in value” incurred by an “insured”, in excess of the “self-insured retention”, arising out of a “covered pollution condition”.

The coverage afforded pursuant to this Supplemental Coverage only applies to “diminution in value” that is reported to the Insurer, in writing, as soon as practicable, and during the “policy period”.

II. The amount the Insurer shall pay for “diminution in value” pursuant to this Supplemental Coverage is limited by the following Aggregate Sublimit of Liability:

Aggregate Sublimit of Liability **\$ 1,000,000**

The Aggregate Sublimit of Liability identified above shall be the maximum amount the Insurer shall pay for all “diminution in value” arising out of all “pollution conditions” otherwise covered pursuant to this Policy. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

III. Section V., DEFINITIONS, of this Policy is hereby amended by addition of the following:

“Covered pollution condition” means a “pollution condition” on, at or under a “covered location” for which coverage is otherwise afforded pursuant to this Policy pursuant to Coverages **A.** or **B.**, only, for “remediation costs” resulting from the first-party discovery of such “pollution condition”. The coverage afforded pursuant to this Endorsement shall not apply to any “diminution in value” arising out of or related to any “pollution conditions” for which coverage for “remediation costs” resulting from the first-party discovery of such “pollution conditions” is excluded pursuant to this Policy.

“Diminution in value” means the decrease in fair market value of a “covered location” as measured by either:

1. An amount developed in a final adjudication by a tax court of competent jurisdiction; or
2. By generally accepted property appraisal methods, including, but not limited to mortgage-equity analysis or sales comparison methods.

IV. If the Insurer and the “insured” disagree on the amount of “diminution in value” that is or may be covered pursuant to this endorsement, either may make written demand for an appraisal of such “diminution in value”. In that event, each party shall select a competent and impartial appraiser. If necessary, the two appraisers shall select an umpire. If the appraisers cannot agree, either may request that the umpire selection be made by a judge of a court having jurisdiction over the matter. The appraisers shall state separately the amount of “diminution in value”. If the appraisers fail to agree to a resolution, they shall submit their differences to the

umpire. A decision agreed to by the appraisers, of the umpire, if necessary, shall be binding upon all parties to this Policy. Each party shall:

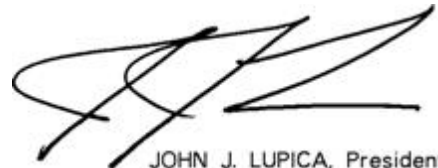
1. Pay its chosen appraiser; and
2. Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, the Insurer shall still retain all of its rights pursuant to this Policy to deny all or a portion of any "claim".

V. Section VI., EXCLUSIONS, of this Policy is hereby amended by addition of the following:

This insurance also does not apply to "diminution in value" arising out of or related to any of the individually excluded exposures identified above.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

FUNGI AND LEGIONELLA COVERAGE (SUBLIMIT) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 10
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

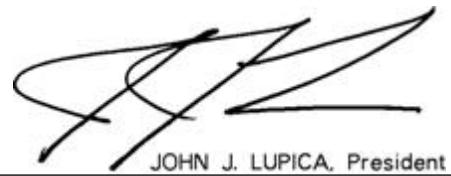
\$ 250,000 shall be the Aggregate Sublimit of Liability applicable to any coverage pursuant to this Policy for "claims", "remediation costs", and associated "legal defense expense" arising out of or related to "fungi" or *legionella pneumophila*. Therefore, this Aggregate Sublimit of Liability shall be the maximum amount the Insurer shall pay for all of the exposures specifically indicated below:

- ☐ "emergency response costs"; *
- ☒ "business interruption loss"; *
- ☐ "diminution in value"; *
- ☐ "rental income"; *
- ☐ "catastrophe management costs"; *
- ☒ "remediation costs";
- ☒ "claims",

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

and associated "legal defense expense" arising out of "pollution conditions" resulting from the presence of "fungi" or *legionella pneumophila* to which this Policy applies. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

**LEAD-BASED PAINT COVERAGE (BODILY INJURY & PROPERTY DAMAGE ONLY)
ENDORSEMENT (PPL III)**

Named Insured CCL Industries Corporation			Endorsement Number 11
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, Subsection **L., Lead-Based Paint**, of this Policy is hereby deleted in its entirety and replaced with the following:

L. Lead-Based Paint

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to lead-based paint.

This exclusion shall not apply to:

1. Third-party "claims" for "bodily injury" and associated "legal defense expenses" arising out of lead-based paint;
2. Third-party, non-governmental "claims" for "property damage" and associated "legal defense expenses" arising out of lead-based paint; and
3. "Remediation costs" arising out of lead-based paint discovered in soil or groundwater.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

NON-OWNED DISPOSAL SITES COVERAGE (BLANKET - NEW WASTE AND HISTORICAL WASTE) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 12
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

- I. Section **V., DEFINITIONS**, Subsection **F.**, of this Policy is hereby deleted in its entirety and replaced with the following:

F. “Covered location” means:

1. Any location specifically identified in Item **8.** of the Declarations to this Policy;
2. Any location that meets the prerequisites to coverage identified in Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any;
3. Any “non-owned disposal site”, provided that any coverage afforded with respect to such “non-owned disposal sites” is limited to third-party “claims” pursuant to Subsection **D.**, above; and
4. Any other location specifically scheduled as a “covered location” by endorsement attached to this Policy, if any.

- II. Solely with respect to coverage for any “non-owned disposal sites” pursuant to this Endorsement, Section **V., DEFINITIONS**, Subsections **D.** and **U.**, of this Policy are hereby deleted in their entirety and replaced with the following:

- D. “Claim”** means the written assertion of a legal right received by the “insured” from a third-party, including, but not limited to, a “government action”, suits or other actions alleging responsibility or liability on the part of the “insured” for “bodily injury”, “property damage” or “remediation costs” arising out of “pollution conditions” to which this insurance applies.

With respect to any coverage afforded with respect “non-owned disposal sites”, covered “claims” are limited to those made by or on behalf of third-parties for “pollution conditions” allegedly attributable to an “named insured’s” waste that is: **1)** generated at a “covered location” other than a “non-owned disposal site”; and **2)** received at the “non-owned disposal site” prior to the expiration date identified in Item **2.a.** of the Declarations to this Policy.

U. “Non-owned disposal site” means:

1. Any disposal site or recycling facility located within the United States of America that has not at any time been owned or operated, in whole or in part, by any “insured”, which receives, or has historically received, a “named insured’s” waste for disposal; provided that such disposal site or recycling facility:
 - a. Was properly permitted and licensed pursuant to “environmental laws” to accept the “named insured’s” wastes at the time of such disposal by all federal, state or other administrative or regulatory bodies or agencies with applicable jurisdiction;
 - b. Was not owned or operated by any person, corporation or unincorporated association that was in bankruptcy at the time the “named insured’s” waste was received for disposal;

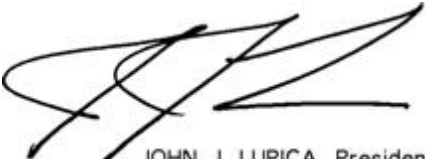
- c. Has not, at any time prior to the inception date of this Policy, been identified on the United States EPA (CERCLA) National Priorities List, CERCLIS List or pursuant to any functional equivalent of those listings made by federal, state, or other administrative or regulatory bodies or agencies with applicable jurisdiction pursuant to “environmental laws”; and
 - d. Was not undergoing voluntary or regulatory-required remediation activities at the time the “named insured’s” waste was received for disposal; or
 - 2. Any disposal site or recycling facility specifically identified on a Schedule of Disposal Sites Endorsement attached to this Policy, if any.

III. Section VI., **EXCLUSIONS**, Subsection O., **Non-Owned Disposal Sites**, of this Policy is hereby deleted in its entirety and replaced with the following:

O. Disposal Sites

“Claims”, “remediation costs” or “legal defense expenses” arising out of or related to “pollution conditions” on, at, under or migrating from disposal sites or recycling facilities that are not “non-owned disposal sites”.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

NOTICE OF CANCELLATION (120 DAYS) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 13
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **IX.**, **GENERAL CONDITIONS**, Subsection **A.**, **Cancellation**, Paragraph **2.**, of this Policy is hereby deleted in its entirety and replaced with the following:

2. This Policy may be cancelled by the Insurer for the following reasons:

a. Non-payment of premium; or

b. Fraud or material misrepresentation on the part of any "insured",

by mailing to the "first named insured" at the "first named insured's" last known address, written notice stating when, not less than one hundred and twenty (120) days thereafter, fifteen (15) days if cancellation is for non-payment of any unpaid portion of the premium, such cancellation shall be effective. The mailing of notice shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall be the end of the "policy period".

Subparagraph **2.b.**, herein, shall apply only to that "insured" that engages in the fraud or misrepresentation. This exception shall not apply to any "insured" who is a parent corporation, subsidiary, employer of, or otherwise affiliated by ownership with, such "insured".

All other terms and conditions of the Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

OTHER INSURANCE (PRIMARY) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 14
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

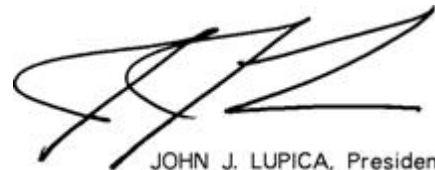
The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **H., Other Insurance**, of this Policy is hereby deleted in its entirety and replaced with the following:

H. Other Insurance

If other valid and collectible insurance is available to the "insured" covering a loss also covered by this Policy, the insurance afforded by this Policy shall apply as primary insurance.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

PRIOR CLAIMS EXCLUSIONARY (ITEMIZED) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 15
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, of this Policy is hereby amended by addition of the following:

This Insurance also does not apply to:

Prior Claims

The "claims" specifically identified below (collectively hereinafter Identified Claims), along with any current or subsequent "claims" made in conjunction with such Identified Claims (e.g., counterclaims, cross-claims or third-party claims made as part of the Identified Claims, any associated appeals of the Identified Claims, any "claims" ultimately consolidated with the Identified Claims, or any "claims" involving different plaintiffs but the same collection of operative facts and/or allegations contained in the Identified Claims), and any associated "legal defense expense".

- Any "claims" based upon, associated with or arising out of the LWD Superfund site located in Calvert City, Kentucky.

All other terms and conditions of this policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

TRANSPORTATION COVERAGE ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 16
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

- I. Section I., **INSURING AGREEMENTS**, Subsection A., NEW POLLUTION CONDITIONS, of this Policy is hereby deleted in its entirety and replaced with the following:

A. NEW POLLUTION CONDITIONS (Coverage A.)

"Claims", "remediation costs", and associated "legal defense expenses", in excess of the "self-insured retention", arising out of a "pollution condition": **1)** on, at, under, or migrating from a "covered location"; or **2)** resulting from "transportation", provided the "claim" is first made or the "insured" first discovers such "pollution condition" during the "policy period". Any such discovery of a "pollution condition" must be reported to the Insurer in writing during the "policy period". Any such "claim" must be reported to the Insurer, in writing, during the "policy period" or any applicable "extended reporting period".

The coverage afforded pursuant to this Coverage A. only applies to "pollution conditions" that first commence, in their entirety, during the "policy period".

- II. Section V., **DEFINITIONS**, Subsection E., of this Policy is hereby deleted in its entirety and replaced with the following:

E. "Transportation" means the movement of the "insured's" waste or products by automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a "covered location" by an "insured", or by a person or entity, other than an "insured", engaged in the business of transporting property for hire, until such time as the waste or product is unloaded from an automobile, aircraft, watercraft, railcar or other conveyance.

- III. Section VI., **EXCLUSIONS**, Subsection Q., **Vehicles**, of this Policy is hereby deleted in its entirety and replaced with the following:

Q. Vehicles

"Claims", "remediation costs" or "legal defense expenses" arising out of or related to "pollution conditions" resulting from the use, maintenance or operation, including loading or unloading, of an automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a "covered location".

This exclusion shall not apply to "transportation".

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

UNDERGROUND STORAGE TANK COVERAGE (BLANKET) ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 17
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **VI.**, **EXCLUSIONS**, Subsection **P.**, **Underground Storage Tanks**, of this Policy is hereby deleted in its entirety.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

WAIVER OF SUBROGATION ENDORSEMENT (PPL III)

Named Insured CCL Industries Corporation			Endorsement Number 18
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **E., Subrogation**, of this Policy is hereby deleted in its entirety and replaced with the following:

E. Subrogation

In the event of any payment pursuant to this Policy by the Insurer, the Insurer shall be subrogated to all of the rights of recovery against any person or organization, and the "insured" shall execute and deliver instruments and papers and do whatever else is necessary to secure such rights. All "insureds" shall do nothing to prejudice such rights. Any recovery as a result of subrogation proceedings arising pursuant to this Policy shall accrue first to the "insureds" to the extent of any payments in excess of the limit of coverage; then to the Insurer to the extent of its payment pursuant to the Policy; and then to the "insured" to the extent of the "self-insured retention". Expenses incurred in such subrogation proceedings shall be apportioned among the interested parties in the recovery in the proportion that each interested party's share in the recovery bears to the total recovery.

Notwithstanding the foregoing, the Insurer hereby waives its rights to subrogate against the entities identified below:

1. Any entity or organization that the "named insured" has agreed, pursuant to a written contract, to waive its rights of subrogation, where such contract is executed prior to the relevant "claim" or "remediation costs" to which this insurance applies.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President
Authorized Representative

KNOWN CONDITIONS EXCLUSION AMENDATORY ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 19
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, Subsection **K., Known Conditions**, of this Policy is hereby deleted in its entirety and replaced with the following following:

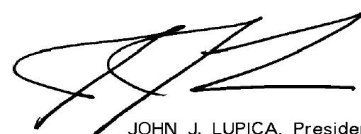
K. Known Conditions

"Claims", "remediation costs", "foreign subsidiary loss", or associated "legal defense expenses", arising out of or related to "pollution conditions" in existence prior to the "policy period" or, with respect to "covered locations" added to the Policy pursuant to the Automatic Acquisition Endorsement attached hereto, prior to the effective date of the acquisition of such "covered locations", and reported to a "responsible person", but not disclosed to the Insurer in the Application or accompanying documents provided to the Insurer prior to the inception date identified in Item **2.** of this Policy, or any previous policy for which this Policy is a renewal thereof.

This exclusion shall not apply to:

1. Non-governmental "claims" for "bodily injury" or "property damage" to which this insurance applies; or
2. Any "pollution conditions" that have been reported to the "responsible person" as not being actionable under "environmental laws" in any Phase I or Phase II Environmental Site Assessment report by a qualified environmental consultant. To the extent that the qualified consultant's actionability determination is premised, in whole or in part, on the use of, or engineering controls in effect at, a "covered location", any coverage afforded under this paragraph shall be contingent upon:
 - a. The "insured's" maintenance of said engineering controls; and
 - b. The continued use of the property in a manner consistent with the consultant's reported assumptions, during the "policy period".

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

SELF-INSURED RETENTION TO DEDUCTIBLE AMENDATORY ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 20
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The “insured” and the Insurer hereby agree to the following changes to this Policy:

I. Section I., INSURING AGREEMENTS, is deleted in its entirety and replaced with the following:

A. NEW POLLUTION CONDITIONS (Coverage A.)

“Claims”, “remediation costs”, and associated “legal defense expenses”, in excess of the “deductible”, arising out of a “pollution condition” on, at, under, or migrating from a “covered location”, provided the “claim” is first made, or the “insured” first discovers such “pollution condition”, during the “policy period”. Any such discovery of a “pollution condition” must be reported to the Insurer, in writing, during the “policy period”. Any such “claim” must be reported to the Insurer, in writing, during the “policy period” or any applicable “extended reporting period”.

The coverage afforded pursuant to this Coverage **A.** only applies to “pollution conditions” that first commence, in their entirety, on or after the inception date identified in Item **2.a.** of the Declarations to this Policy.

B. PRE-EXISTING POLLUTION CONDITIONS (Coverage B.)

“Claims”, “remediation costs”, and associated “legal defense expenses”, in excess of the “deductible”, arising out of a “pollution condition” on, at, under, or migrating from a “covered location”, provided the “claim” is first made, or the “insured” first discovers such “pollution condition”, during the “policy period”. Any such discovery of a “pollution condition” must be reported to the Insurer, in writing, during the “policy period”. Any such “claim” must be reported to the Insurer, in writing, during the “policy period” or any applicable “extended reporting period”.

The coverage afforded pursuant to this Coverage **B.** only applies to “pollution conditions” that first commenced, in whole or part, prior to the inception date identified in Item **3.a.** of the Declarations to this Policy.

II. Section II., LIMITS OF LIABILITY AND SELF-INSURED RETENTION, Subsections A. and B., of this Policy are hereby deleted in its entirety and replaced with the following:

A. The Insurer shall pay on behalf of the “insured” for any “claims” or “remediation costs” covered pursuant to this Policy, including “legal defense expenses”, but only for those amounts that are in excess of the Deductible amount shown in the Declarations. In the event the “insured” fails to satisfy its Deductible obligations pursuant to this Policy, the Insurer will pay, subject to the Limits of Liability of this Policy, all of any outstanding Deductible amount to effect resolution of any “claim” and/or to satisfy all “remediation costs”. If the Insurer makes any such payment, upon receipt of notice from the Insurer, the “first named insured” shall promptly reimburse the Insurer for all amounts paid by the Insurer.

B. One “deductible” shall apply to all “claims”, “remediation costs” and “legal defense expenses” arising from the same, continuous, repeated, or related “pollution condition”.

III. Section III., DEFENSE AND SETTLEMENT, Subsections B., C., D., and E., of this Policy are hereby deleted in their entirety and replaced with the following:

B. The Insurer shall have the right to select legal counsel to represent the “insured” for the investigation, adjustment, and defense of any “claims” covered under this Policy. Selection of legal counsel by the Insurer shall not be done without the consent of the “insured”; such consent

shall not be unreasonably withheld. "Legal defense expenses" incurred prior to the selection of legal counsel by the Insurer shall not be covered under this Policy, or credited against the "deductible".

In the event the "insured" is entitled by law to select independent counsel to defend itself at the Insurer's expense, the attorney fees and all other litigation expenses the Insurer shall pay to that counsel are limited to the rates the Insurer actually pays to counsel that the Insurer normally retains in the ordinary course of business when defending "claims" or lawsuits of similar complexity in the jurisdiction where the "claim" arose or is being defended. In addition, the "insured" and the Insurer agree that the Insurer may exercise the right to require that such counsel: **1)** have certain minimum qualifications with respect to their competency, including experience in defending "claims" similar to those being asserted against the "insured"; **2)** maintain suitable errors and omissions insurance coverage; **3)** be located within a reasonable proximity to the jurisdiction of the "claim"; and **4)** agree in writing to respond in a timely manner to the Insurer's requests for information regarding the "claim". The "insured" may at anytime, by its signed consent, freely and fully waive its right to select independent counsel.

- C. The "insured" shall have the right and the duty to retain a qualified environmental consultant to perform any investigation and/or remediation of any "pollution condition" covered under this Policy. The "insured" must receive the written consent of the Insurer prior to the selection and retention of such consultant, except in the event of an "emergency response". Any costs incurred prior to such consent shall not be covered under this Policy, or credited against the "deductible", except in the event of an "emergency response".
- D. "Legal defense expenses" reduce the Limits of Liability identified in Items **2.**, **3.** and **4.** of the Declarations and shall be applied to the "deductible".
- E. The Insurer shall present all settlement offers to the "insured". If the Insurer recommends a settlement which is acceptable to a claimant, exceeds any applicable "deductible", is within the Limits of Liability, and does not impose any additional unreasonable burdens on the "insured", and the "insured" refuses to consent to such settlement offer, then the Insurer's duty to defend shall end. The "insured" shall defend such "claim" independently. The Insurer's liability shall not exceed the amount for which the "claim" could have been settled if the Insurer's recommendation had been accepted, exclusive of the "deductible".

IV. Section **V.**, **DEFINITIONS**, Subsections **K.** and **AA.**, of this Policy are hereby deleted in their entirety and replaced with the following:

K. "First named insured" means the person or entity as identified in Item **1.** of the Declarations. The "first named insured" is the party responsible for the payment of any premiums and the payment of, or evidencing payment of, any applicable "deductible" amounts. The "first named insured" shall also serve as the sole agent on behalf of all "insureds" with respect to the provision and receipt of notices, including notice of cancellation or non-renewal, receipt and acceptance of any endorsements or any other changes to this Policy, return of any premium, assignment of any interest under this Policy, as well as the exercise of any applicable "extended reporting period", unless any such responsibilities are otherwise designated by endorsement.

AA. "Deductible" means the dollar amount indicated in Items **2.d.** or **3.d.**, of the Declarations to this Policy, or as otherwise designated by endorsement, if any.

V. Section **VII.**, **REPORTING AND COOPERATION**, Subsection **D.**, of this Policy is hereby deleted in its entirety and replaced with the following:

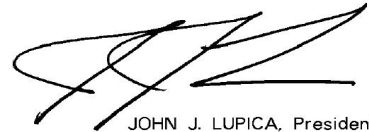
D. Upon the discovery of a "pollution condition", the "insured" shall make every attempt to mitigate any loss and comply with applicable "environmental laws". The Insurer shall have the right, but not the duty, to mitigate such "pollution conditions" if, in the sole judgment of the Insurer, the "insured" fails to take reasonable steps to do so. In that event, any "remediation costs" incurred by the Insurer shall be deemed incurred by the "insured", and shall be subject to the "deductible" and Limits of Liability identified in the Declarations.

VI. Section **IX.**, **GENERAL CONDITIONS**, Subsections **D.**, **Bankruptcy**, of this Policy is hereby deleted in its entirety and replaced with the following:

D. Bankruptcy

The insolvency or bankruptcy of any "insured" or any "insured's" estate shall not relieve the Insurer of its obligations under this Policy. However, any such insolvency or bankruptcy of the "insured" or the "insured's" estate shall not relieve the "insured" of its "deductible" obligations under this Policy. This insurance shall not replace any other insurance to which this Policy is excess, nor shall this Policy drop down to be primary, in the event of the insolvency or bankruptcy of any underlying insurer.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

PROPERTY DAMAGE AMENDATORY (STIGMA) ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 21
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

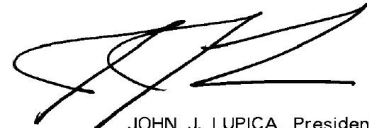
The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **V., DEFINITIONS**, Subsection **X.**, of this Policy is hereby deleted in its entirety and replaced with the following following:

X. "Property damage" means:

1. Physical injury to, or destruction of, tangible property of a third-party, including all resulting loss of use of that property;
2. Loss of use of tangible property of a third-party, that is not physically injured or destroyed;
3. Diminished value of tangible property of a third-party, including any diminution due to alleged stigma associated with a covered "pollution condition"; and,
4. "Natural resource damages".

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

RESPONSIBLE PERSON AMENDATORY ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 22
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

Section **V., DEFINITIONS**, Subsection **Z.**, of this Policy is hereby deleted in its entirety and replaced with the following:

Z. "Responsible person" means any facility manager responsible for environmental affairs, control, or compliance at any individual "covered location", the Vice President of Risk and Environmental Management of the "first named insured", and any officer or director of, or partner in, a "named insured".

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

INSURED VS. INSURED AMENDATORY ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 23
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

I. Section VI., **EXCLUSIONS**, Subsection I., **Insured vs. Insured**, of this Policy is deleted in its entirety.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

SCHEDULE OF COVERED LOCATIONS (INADVERTENTLY OMITTED LOCATIONS - NEW CONDITIONS ONLY) ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 24
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

- I. Section **V., DEFINITIONS**, Subsection **F.**, of this Policy is hereby deleted in its entirety and replaced with the following:
 - F. "Covered location" means:
 1. Any location specifically identified in Item 8. of the Declarations to this Policy;
 2. Any location that meets the prerequisites to coverage identified in Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any; and
 3. Any other location specifically scheduled as a "covered location" by endorsement attached to this Policy, if any.
 4. Any location that was inadvertently omitted from the Statement of Values titled "EIL Schedule of Locations – Current & Divested 11-28-14.xls" and was owned, operated, managed or leased by the "first named insured" or any "named insured" upon the inception date identified in Item 2. of the Declarations to this Policy; and
- I. Solely with respect to "pollution conditions" on, at, under or migrating from an inadvertently omitted location subject to coverage pursuant to Paragraph I., Subparagraph F., Items 2. or 4., above, the "insured" and the Insurer hereby agree that no coverage shall be afforded pursuant to this Policy for "pollution conditions" on, at, under, or migrating from such "covered location", which first commenced, in whole or in part, prior to the inception date identified in Item 2. of the Declarations to this Policy.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

POLLUTION CONDITION AMENDATORY (EMF) ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 25
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The "insured" and the Insurer hereby agree to the following changes to this Policy:

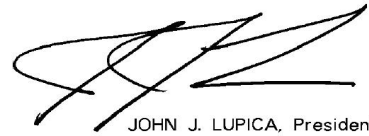
Section **V.**, **DEFINITIONS**, Subsection **W.**, of this Policy is hereby deleted in its entirety and replaced with the following:

W. "Pollution condition" means:

1. The presence of "fungi" or *legionella pneumophila*;
2. "Illicit abandonment"; or
3. the discharge, dispersal, release, escape, migration or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, electromagnetic fields, or waste materials, on, in, into, or upon land and structures thereupon, the atmosphere, surface water, or groundwater.

For the purpose of this definition, waste materials includes, but is not limited to "low-level radioactive waste", "mixed waste" and medical, infectious and pathological waste.

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

SCHEDULE OF ADDITIONAL INSUREDS (VICARIOUS ONLY) ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 26
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

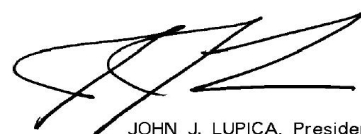
The "insured" and the Insurer hereby agree to the following changes to this Policy:

- I. The persons or entities identified in the Schedule of Additional Insureds, below, are "additional insureds" pursuant to this Policy, but solely with respect to their vicarious liability for any "named insured's" or "foreign subsidiary's" direct liability : **1)** arising out of "pollution conditions" on, at under or migrating from a "covered location"; **2)** resulting from "transportation" or **3)** resulting from "covered operations", and solely to the extent that such person or entity is domiciled or its principle place of business is located in the United States of America or other jurisdiction where the Insurer is either licensed or legally permitted to provide insurance without a license.
- II. In the event that any person or entity inadvertently identified in the Schedule of Additional Insureds, below, is domiciled or its principle place of business is located in a jurisdiction where the Insurer is not licensed and may not provide insurance without a license, such person or entity shall not be an "additional insured" pursuant to this Policy. Instead, the Insurer agrees to indemnify the relevant "named insured" for its ownership interest in, or amounts that the relevant "named insured" represents that it has a contractual or other legal obligation to: **1)** indemnify such person or entity for which they or it, respectively, have an underlying legal obligation to pay for "bodily injury", "property damage" or "remediation costs", including any associated "legal defense expense", arising out of a "pollution condition" on, at, under or migrating from a "covered location"; or **2)** secure insurance coverage for such person or entity for "bodily injury", "property damage" or "remediation costs", including any associated "legal defense expense", arising out of a "pollution condition" on, at, under or migrating from a "covered location", consistent with the indemnity coverage afforded to relevant "named insureds" with respect to "foreign subsidiaries" pursuant to Section I., **INSURING AGREEMENTS**, Subsection D., FOREIGN POLLUTION CONDITIONS COVERAGE, of this Policy.

Schedule of Additional Insureds

1. Any lenders that a "named insured" is obligated or required to name as an "insured" under this Policy where such obligation or requirement is in a written contract executed prior any "claim".

All other terms and conditions of this Policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

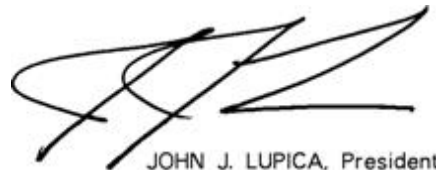
TRADE OR ECONOMIC SANCTIONS ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 27
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This insurance does not apply to the extent that trade or economic sanctions or other laws or regulations prohibit us from providing insurance, including, but not limited to, the payment of claims. All other terms and conditions of the policy remain unchanged.



JOHN J. LUPICA, President

Authorized Representative

SERVICE OF SUIT ENDORSEMENT

Named Insured CCL Industries Corporation			Endorsement Number 28
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Information about service of suits upon the company is given below. Service of process of suits against the company may be made upon the following person, or another person the company may designate:

Saverio Rocca, Assistant General Counsel
ACE USA Companies
436 Walnut Street
Philadelphia, PA 19106-3703

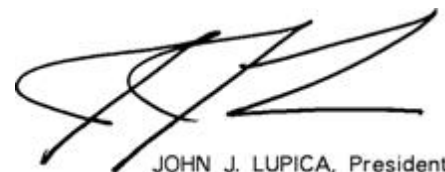
The person named above is authorized and directed to accept service of process on the company's behalf in any action, suit or proceeding instituted against the company. If the insured requests, the company will give the insured a written promise that a general appearance will be entered on the company's behalf if a suit is brought.

If the insured requests, the company will submit to the jurisdiction of any court of competent jurisdiction. The company will accept the final decision of that court or any Appellate Court in the event of an appeal.

The law of some jurisdictions of the United States of America require that the Superintendent, Commissioner or Director of Insurance (or their successor in office) be designated as the company's agent for service of process. In these jurisdictions, the company designates the Director of Insurance as the company's true and lawful attorney upon whom service of process on the company's behalf may be made. The company also authorizes the Director of Insurance to mail process received on the company's behalf to the company person named above.

If the insured is a resident of Canada, the insured may also serve suit upon the company by serving the government official designated by the law of the insured's province.

NOTHING HEREIN CONTAINED SHALL BE HELD TO VARY, ALTER, WAIVE OR EXTEND ANY OF THE TERMS, CONDITIONS, OR LIMITATIONS OF THE POLICY TO WHICH THIS ENDORSEMENT IS ATTACHED OTHER THAN AS ABOVE STATED.



JOHN J. LUPICA, President
Authorized Representative

SIGNATURES

Named Insured CCL Industries Corporation			Endorsement Number 29
Policy Symbol PPL	Policy Number G24876871 004	Policy Period 03/31/2015 to 03/31/2018	Effective Date of Endorsement 03/31/2015
Issued By (Name of Insurance Company) Illinois Union Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THE ONLY SIGNATURES APPLICABLE TO THIS POLICY ARE THOSE REPRESENTING THE COMPANY NAMED ON THE FIRST PAGE OF THE DECLARATIONS.

By signing and delivering the policy to you, we state that it is a valid contract.

ILLINOIS UNION INSURANCE COMPANY (A stock company)
525 W. Monroe Street, Suite 400, Chicago, Illinois 60661

WESTCHESTER SURPLUS LINES INSURANCE COMPANY (A stock company)
Royal Centre Two, 11575 Great Oaks Way, Suite 200, Alpharetta, GA 30022


REBECCA L. COLLINS, Secretary


JOHN J. LUPICA, President

Authorized Representative



Illinois Union Insurance Company
Insurance Company

CCL Industries Corporation
Policyholder

PPL G24876871 004
Policy Number

MARSH USA INC
Broker/Producer

POLICYHOLDER DISCLOSURE NOTICE OF TERRORISM INSURANCE COVERAGE

You were notified that under the Terrorism Risk Insurance Act, as amended, you have a right to purchase insurance coverage for losses resulting from acts of terrorism. *As defined in Section 102(1) of the Act:* The term "act of terrorism" means any act or acts that are certified by the Secretary of the Treasury---in consultation with the Secretary of Homeland Security, and the Attorney General of the United States---to be an act of terrorism; to be a violent act or an act that is dangerous to human life, property, or infrastructure; to have resulted in damage within the United States, or outside the United States in the case of certain air carriers or vessels or the premises of a United States mission; and to have been committed by an individual or individuals as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the United States Government by coercion.

YOU SHOULD KNOW THAT WHERE COVERAGE IS PROVIDED BY YOUR POLICY FOR LOSSES RESULTING FROM CERTIFIED ACTS OF TERRORISM, SUCH LOSSES MAY BE PARTIALLY REIMBURSED BY THE UNITED STATES GOVERNMENT UNDER A FORMULA ESTABLISHED BY FEDERAL LAW. HOWEVER, YOUR POLICY MAY CONTAIN OTHER EXCLUSIONS WHICH MIGHT AFFECT YOUR COVERAGE, SUCH AS AN EXCLUSION FOR NUCLEAR EVENTS. UNDER THE FORMULA, THE UNITED STATES GOVERNMENT GENERALLY REIMBURSES 85% FOR YEAR 2015, 84% BEGINNING ON JANUARY 1, 2016; 83% BEGINNING ON JANUARY 1, 2017, 82% BEGINNING ON JANUARY 1, 2018; 81% BEGINNING ON JANUARY 1, 2019 AND 80% BEGINNING ON JANUARY 1, 2020, OF COVERED TERRORISM LOSSES EXCEEDING THE STATUTORILY ESTABLISHED DEDUCTIBLE PAID BY THE INSURANCE COMPANY PROVIDING THE COVERAGE. THE PREMIUM THAT WOULD BE CHARGED FOR THIS COVERAGE IS PROVIDED BELOW AND DOES NOT INCLUDE ANY CHARGES FOR THE PORTION OF LOSS THAT MAY BE COVERED BY THE FEDERAL GOVERNMENT UNDER THE ACT.

YOU SHOULD ALSO KNOW THAT THE TERRORISM RISK INSURANCE ACT, AS AMENDED, CONTAINS A \$100 BILLION CAP THAT LIMITS U.S. GOVERNMENT REIMBURSEMENT AS WELL AS INSURERS' LIABILITY FOR LOSSES RESULTING FROM CERTIFIED ACTS OF TERRORISM WHEN THE AMOUNT OF SUCH LOSSES IN ANY ONE CALENDAR YEAR EXCEEDS \$100 BILLION. IF THE AGGREGATE INSURED LOSSES FOR ALL INSURERS EXCEED \$100 BILLION, YOUR COVERAGE MAY BE REDUCED.

You elected **NOT** to purchase terrorism coverage under the Act at the price indicated. ACCORDINGLY, WE WILL **NOT** PROVIDE THIS COVERAGE AND YOU DO NOT OWE THE ADDITIONAL PREMIUM FOR THAT COVERAGE INDICATED BELOW.

Terrorism coverage described by the Act under your policy was made available to you for additional premium in the amount of \$27,500., however you elected to decline such coverage.
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ACE USA

- ☒ Illinois Union Insurance Company
☐ Westchester Surplus Lines Insurance Company
☐ -

Insured:
CCL Industries Corporation

Attached To Policy No.: PPL G24876871 004

Effective Date: 03/31/2015

PENNSYLVANIA SURPLUS LINES NOTIFICATION

THE INSURER WHICH HAS ISSUED THIS INSURANCE IS NOT LICENSED BY THE PENNSYLVANIA INSURANCE DEPARTMENT AND IS SUBJECT TO LIMITED REGULATION. THIS INSURANCE IS NOT COVERED BY THE PENNSYLVANIA PROPERTY AND CASUALTY INSURANCE GUARANTY ASSOCIATION.

NOTHING HEREIN CONTAINED SHALL BE HELD TO VARY, ALTER, WAIVE OR EXTEND ANY OF THE TERMS, CONDITIONS, OR LIMITATIONS OF THE POLICY TO WHICH THIS NOTICE IS ATTACHED OTHER THAN AS STATED ABOVE.



ACE Producer Compensation Practices & Policies

ACE believes that policyholders should have access to information about ACE's practices and policies related to the payment of compensation to brokers and independent agents. You can obtain that information by accessing our website at <http://www.aceproducercompensation.com> or by calling the following toll-free telephone number: 1-866-512-2862.

U.S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL ("OFAC") ADVISORY NOTICE TO POLICYHOLDERS

No coverage is provided by this Policyholder Notice nor can it be construed to replace any provisions of your policy. You should read your policy and review your Declarations page for complete information on the coverages you are provided.

This Notice provides information concerning possible impact on your insurance coverage due to directives issued by OFAC. **Please read this Notice carefully.**

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous:

- Foreign agents;
- Front organizations;
- Terrorists;
- Terrorist organizations; and
- Narcotics traffickers;

as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's web site – <http://www.treas.gov/ofac>.

In accordance with OFAC regulations, if it is determined that you or any other insured, or any person or entity claiming the benefits of this insurance has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, this insurance will be considered a blocked or frozen contract and all provisions of this insurance are immediately subject to OFAC. When an insurance policy is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments also apply.



Global Premises Pollution Liability Insurance Policy

(claims-made coverage)

Declarations

This Policy is issued by the stock insurance company identified above (herein called *the Insurer*).

THIS POLICY PROVIDES LIABILITY COVERAGE ON A CLAIMS-MADE AND REPORTED BASIS, WHICH COVERS ONLY CLAIMS FIRST MADE AGAINST THE INSURED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. THIS POLICY PROVIDES COVERAGE FOR REMEDIATION COSTS ON A DISCOVERED AND REPORTED BASIS, WHICH COVERS ONLY POLLUTION CONDITIONS FIRST DISCOVERED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. PLEASE READ THIS POLICY CAREFULLY. SOME OF THE PROVISIONS CONTAINED IN THIS POLICY RESTRICT COVERAGE, SPECIFY WHAT IS AND IS NOT COVERED AND DESIGNATE YOUR RIGHTS AND DUTIES. LEGAL DEFENCE EXPENSES ARE SUBJECT TO AND SHALL ERODE THE LIMITS OF LIABILITY AND ANY APPLICABLE SELF-INSURED RETENTION.

THE DECLARATIONS, TOGETHER WITH THE COMPLETED AND SIGNED APPLICATION, THIS POLICY, AND ANY ENDORSEMENTS OR SCHEDULES ATTACHED HERETO, CONSTITUTE THE INSURANCE POLICY.

Policy No.: EIL333621	Renewal of: EIL333621
Item 1.	First Named Insured: CCL Industries Inc.
	Address: 105 Gordon Baker Road Suite 500 Willowdale, Ontario M2H 3P8

Item 2.	COVERAGE A. – New Pollution Conditions Coverage	
a. Policy Period local time of the address shown in Item. 1	Policy Inception Date: March 31, 2015 12:01 A.M.	Policy Expiration Date: March 31, 2018 12:01 A.M.
b. Limits of Liability per pollution condition	\$50,000,000	
c. Limits of Liability aggregate all pollution conditions	\$50,000,000	
d. Self-Insured Retention per pollution condition	\$1,000,000	
<input type="checkbox"/> Coverage A. not provided under this Policy (all fields in Item 2. are left blank)		

Item 3.	COVERAGE B. – Pre-Existing Pollution Conditions Coverage	
a. Policy Period local time of the address shown in Item. 1	Policy Inception Date: March 31, 2015 12:01 A.M.	Policy Expiration Date: March 31, 2018 12:01 A.M.
b. Limits of Liability per pollution condition	\$50,000,000	
c. Limits of Liability aggregate all pollution conditions	\$50,000,000	
d. Self-Insured Retention per pollution condition	\$1,000,000	
<input type="checkbox"/> Coverage B. not provided under this Policy (all fields in Item 3. are left blank)		



Global Premises Pollution Liability Insurance Policy

(claims-made coverage)

Declarations

Item 4.	COVERAGE C. – Foreign Jurisdiction Pollution Conditions Coverage	
a. Policy Period local time of the address shown in Item. 1	Policy Inception Date: March 31, 2015 12:01 A.M.	Policy Expiration Date: March 31, 2018 12:01 A.M.
b. Limits of Liability per pollution condition <input type="checkbox"/>	\$50,000,000	
c. Limits of Liability aggregate all pollution conditions <input type="checkbox"/>	\$50,000,000	
d. Self-Insured Retention per pollution condition <input type="checkbox"/>	\$1,000,000	
<input type="checkbox"/> Coverage C. not provided under this Policy (all fields in Item 4. are left blank)		

Item 5.	Limits of Liability: <u>Total Policy & Program</u> <u>Aggregate</u>	\$50,000,000
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Item 6.	Premium: <div style="background-color: black; width: 100px; height: 20px;"></div>	(The premium shall be 25 minimum-earned as of the first day of the Policy Period indicated in Item.s 2.a., above)
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***All dollar amounts identified above are in *Canadian dollars*.**

Item 7.	Producer: Name Address	Marsh Canada Limited 120 Bremner Blvd. Toronto, Ontario M5J 0A8
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Item 8.	a. Notice of Claim or Pollution Condition	b. All other Notices
Notices	ACE INA Insurance 25 York Street, 14th Floor Toronto, Ontario, M5J 2V5 Canada Attn: Claims Department Facsimile: (416) 368-0641 First Notice Email: canadaclaims_acegroup.com	ACE INA Insurance 25 York Street, 14th Floor Toronto, Ontario, M5J 2V5 Canada Attention: Environmental Manager
	24 Hour Emergency Response Hotline	1-888-310-9553

Item 9.	Covered Locations:	<input checked="" type="checkbox"/> if checked here, schedule of Covered Locations is designated via endorsement.
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Global Premises Pollution Liability Insurance Policy

(claims-made coverage)

Declarations

Policy Form No. PFC-31903 (11 10) Global Premises Pollution Liability Insurance Policy

Endorsements and Notices Attached at Policy Issuance:



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

Declarations

Endorsement Number:	Form Number:	Form Name:
1.	PFC31914	Schedule of Additional Insureds (Broad) Endorsement
2.	PFC31968	Schedule of Covered Locations Coverage A and or B with Retroactive Date Endorsement
3.	PFC32060	Non – Owned Disposal Sites Coverage Blanket - New Waste and Historical Waste Endorsement
4.	PFC32125	Transportation Coverage Endorsement
5.	PFC32126	Schedule of Underground Storage Tanks Endorsement
6.	PFC31937	Business Interruption and Delay Expense Endorsement
7.	PFC31933	Automatic Acquisition and Due Diligence Endorsement
8.	PFC32012	Fungi and Legionella Coverage Sublimit Endorsement
9.	PFC32056	Schedule of Named Insured Broad Endorsement
10.	PFC32070	Notice of Cancellation 120 Days Endorsement
11.	PFC32077	Other Insurance Primary Endorsement
12.	PFC32020	Global Program Difference in condition / Difference in Limit Endorsement
13.	PFC32021	Global Premises Pollution Liability Program Schedule Endorsement
14.	PFC32010	Schedule of Foreign Subsidiaries Endorsement
15.	PFC32086	Premium Earn Out Multi Year Endorsement
16.	PFC32088	First Party Property Diminution Coverage Endorsement
17.	PFC32026	Jurisdiction And Venue/Choice Of Law Amendatory Deletion Endorsement
18.	PFC32134	Waiver of Subrogation Endorsement
19.	PFC31912	Schedule Of Additional Insureds Broad With By Contract Endorsement
20.	PFC31911	Additional Insured Schedule Mortgagee Endorsement
21.	PFC32007	Basic Extended Reporting Period 90 Days Endorsement
22.	MANU	Schedule of Covered Locations Inadvertently omitted Locations – New Conditions Only Endorsement
23.	MANU	Pollution Condition Amendatory Inclusion of Electromagnetic Fields Endorsement
24.	MANU	Responsible Person Amendatory Endorsement



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

Declarations

25.	MANU	SIR Payment Recognition Endorsement
26.	MANU	Property Damage Amendatory (Stigma) Endorsement
27.	MANU	Coverage Territory Amendatory Endorsement
28.	MANU	Asbestos, Lead-Based Paint and Punitive Damages Sublimit-Reinsurance Endorsement
29.	PFC32089	Prior Claims Exclusionary Endorsement
30.	MANU	Insured vs. Insured Amendatory Endorsement
31.	MANU	Schedule of Known Conditions Documents Endorsement
32.	PFC31961	Coverage Limitation and Reopener Endorsement
33.	PFC32045	Location Specific Pre-Existing Pollutions Third Party Claims Coverage Divested Properties Full Retro Endorsement
34.	ALL-21101	Trade or Economic Sanctions Endorsement
35.	PFC39723	Signature Endorsement

IN WITNESS WHEREOF, the Insurer has caused this Policy to be countersigned by a duly authorized representative of the Insurer.

DATE: 05/01/2015
MO DAY YR

AUTHORIZED REPRESENTATIVE



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

This Policy is issued by the stock insurance company identified above (hereinafter *the Insurer*).

THIS POLICY PROVIDES LIABILITY COVERAGE ON A CLAIMS-MADE AND REPORTED BASIS, WHICH COVERS ONLY CLAIMS FIRST MADE AGAINST THE INSURED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. THIS POLICY PROVIDES COVERAGE FOR REMEDIATION COSTS ON A DISCOVERED AND REPORTED BASIS, WHICH COVERS ONLY POLLUTION CONDITIONS FIRST DISCOVERED AND REPORTED TO THE INSURER, IN WRITING, DURING THE POLICY PERIOD. PLEASE READ THIS POLICY CAREFULLY. SOME OF THE PROVISIONS CONTAINED IN THIS POLICY RESTRICT COVERAGE, SPECIFY WHAT IS AND IS NOT COVERED AND DESIGNATE YOUR RIGHTS AND DUTIES. LEGAL DEFENCE EXPENSES ARE SUBJECT TO AND SHALL ERODE THE LIMITS OF LIABILITY AND ANY APPLICABLE SELF-INSURED RETENTION.

Throughout this Policy the words *the Insurer* shall refer to the company providing this insurance. Other words and phrases that appear in quotation marks have special meanings and are defined in Section V., **DEFINITIONS**.

In consideration of the payment of the premium and in reliance upon all statements made in the Application to this Policy, including the information furnished in connection therewith, and subject to all terms, definitions, conditions, exclusions and limitations of this Policy, the Insurer agrees to provide insurance coverage to the as described herein.

I. INSURING AGREEMENTS

Solely to the extent that the Coverages, below, are identified on the Declarations to this Policy as being underwritten by the Insurer, the Insurer agrees to pay on behalf of the or in such jurisdictions where the Insurer may be prevented by law from paying on behalf of the , the Insurer agrees to indemnify the relevant pursuant to Coverage C., below, for:

A. NEW POLLUTION CONDITIONS (Coverage A.)

☐ Claims ☐ Remediation costs ☐ and associated ☐ legal defence expenses ☐ in excess of the ☐ self-insured retention ☐ arising out of a ☐ pollution condition ☐ on, at, under, or migrating from a ☐ covered location ☐ provided the ☐ claim ☐ is first made, or the ☐ insured ☐ first discovers such ☐ pollution condition ☐ during the ☐ policy period ☐. Any such discovery of a ☐ pollution condition ☐ must be reported to the Insurer, in writing, during the ☐ policy period ☐. Any such ☐ claim ☐ must be reported to the Insurer, in writing, during the ☐ policy period ☐ or any applicable ☐ extended reporting period ☐.

It is a condition precedent to coverage afforded pursuant to this Coverage A. that all ☐ pollution conditions ☐ first commence, in their entirety, during the ☐ policy period ☐.

B. PRE-EXISTING POLLUTION CONDITIONS (Coverage B.)

☐ Claims ☐ Remediation costs ☐ and associated ☐ legal defence expenses ☐ in excess of the ☐ self-insured retention ☐ arising out of a ☐ pollution condition ☐ on, at, under, or migrating from a ☐ covered location ☐ provided the ☐ claim ☐ is first made, or the ☐ insured ☐ first discovers such ☐ pollution condition ☐ during the ☐ policy period ☐. Any such discovery of a ☐ pollution condition ☐ must be reported to the Insurer, in writing, during the ☐ policy period ☐. Any such ☐ claim ☐ must be reported to the Insurer, in writing, during the ☐ policy period ☐ or any applicable ☐ extended reporting period ☐.

It is a condition precedent to coverage afforded pursuant to this Coverage B. that all ☐ pollution conditions ☐ first commenced, in whole or part, prior to the ☐ policy period ☐.

C. FOREIGN POLLUTION CONDITIONS (Coverage C.)

1. ☐ Foreign loss ☐ in excess of the ☐ self-insured retention ☐ which the ☐ insured ☐ becomes legally obligated to pay because of a ☐ foreign claim ☐ arising out of ☐ , or its discovery of, a ☐ pollution condition ☐ and
2. ☐ Foreign subsidiary loss ☐ in excess of the ☐ self-insured retention ☐ which the relevant ☐ named insured ☐ becomes legally obligated to pay because of a ☐ foreign subsidiary claim ☐ arising out of a ☐ pollution condition ☐.



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

Subject to the Limits of Liability identified in the Declarations to this Policy, as modified by any applicable endorsement attached hereto, if any, the maximum amount that the Insurer shall pay for any [foreign subsidiary loss] pursuant to Paragraph 2., immediately above, shall be the larger of either:

1. The relevant [named insured's] ownership loss; or
2. Any portion of the [foreign subsidiary loss] provided that the relevant [named insured] represents that it has a contractual or other legal obligation to:
 - a. Reimburse its [foreign subsidiary] for that portion of such [foreign subsidiary loss] or
 - b. Secure insurance for its [foreign subsidiary] for that portion of such [foreign subsidiary loss]

and that such contractual or other legal obligation existed prior to, and at the time of, the [named insured's] discovery of the [pollution condition] or its discovery of the underlying matter substantiating the [foreign subsidiary claim] being made with respect to the [pollution condition], whichever occurs first.

The coverage afforded pursuant to this Coverage C. only applies to the extent that:

1. Any such [pollution condition] and any associated [foreign loss], [ownership loss] or [foreign subsidiary loss] would have otherwise been covered pursuant to either Coverage A. or B., above, or any Supplemental Coverage added to this Policy by endorsement, if incurred by an [insured] pursuant to this Policy with respect to a [pollution condition] located in a jurisdiction where the Insurer was licensed or otherwise permitted to insure such loss exposure; and
2. With respect to coverage afforded pursuant to the circumstances identified in Paragraph 1., above, only, any such [foreign claim] is first made against the [insured] and reported by the [insured] to the Insurer, in writing, during the [policy period] or any applicable [extended reporting period]; and
3. With respect to coverage afforded pursuant to the circumstances identified in Paragraph 2., above, only:
 - a. Upon receipt of a [foreign subsidiary claim] to which this insurance may apply, in whole or in part, the relevant [named insured] exercises its right to assume control of the investigation, adjustment, defence and settlement of any alleged [foreign subsidiary loss] pursuant to Section III., **DEFENCE AND SETTLEMENT**, Subsection F., and assign those rights to the Insurer; and
 - b. Any such [foreign subsidiary claim] is first made against the relevant [named insured] and reported by the [named insured] to the Insurer, during the [policy period] or any applicable [extended reporting period]

The insurance provided pursuant to this Coverage C. only applies when the [pollution condition] takes place in a jurisdiction in which the Insurer is not licensed and where the Insurer is not permitted to provide insurance without a license.

II. LIMITS OF LIABILITY AND SELF-INSURED RETENTION

- A. It is expressly agreed that the Insurer's obligation to pay for any covered [claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expense] pursuant to this Policy shall attach to the Insurer only after the [first named insured] has paid, or has provided evidence to the Insurer that another [named insured] or [foreign subsidiary] has paid, the full amount of the [self-insured retention] with respect to any covered [pollution condition]. Under no circumstances shall the Insurer be liable to pay any amount within the [self-insured retention]. In the event that the [first named insured] cannot provide satisfactory evidence that a [named insured] or [foreign subsidiary] has paid the full amount of the [self-insured retention] with respect to any covered [pollution condition], the [first named insured] shall remain responsible to pay the [self-insured retention] before the Insurer's payment obligation pursuant to this Policy shall attach with respect to coverage sought by any [insured].
- B. One [self-insured retention] shall apply to all [claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] and [legal defence expense] arising out of the same, continuous, repeated, or related [pollution condition].



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- C. With respect to Coverage **A.**, and subject to Subsections **D.**, **I.** and **J.**, below, the most the Insurer shall pay for all [claims], [remediation costs], and associated [legal defence expenses] arising out of the same, continuous, repeated, or related [pollution condition] is the Limit of Liability identified in Item **2.b.** of the Declarations.
- D. With respect to Coverage **A.**, and subject to Subsections **I.** and **J.**, below, the Limit of Liability identified in Item **2.c.** of the Declarations shall be the maximum liability of the Insurer pursuant to this Policy with respect to all [claims], [remediation costs] and associated [legal defence expense] for all [pollution conditions].
- E. With respect to Coverage **B.**, and subject to Subsections **F.**, **I.** and **J.**, below, the most the Insurer shall pay for all [claims], [remediation costs] and [legal defence expense] arising out of the same, continuous, repeated, or related [pollution condition] is the Limit of Liability identified in Item **3.b.** of the Declarations to this Policy.
- F. With respect to Coverage **B.**, and subject to Subsection **I.** and **J.**, below, the Limit of Liability identified in Item **3.c.** of the Declarations shall be the maximum liability of the Insurer pursuant to this Policy with respect to all [claims], [remediation costs] and [legal defence expenses] for all [pollution conditions].
- G. With respect to Coverage **C.**, and subject to Subsections **H.**, **I.** and **J.**, below, the most the Insurer shall reimburse the relevant [named insured] for all [foreign loss], [ownership loss] and [foreign subsidiary loss] arising out of the same, continuous, repeated, or related [pollution conditions] is the Limit of Liability identified in Item **4.b.** of the Declarations.
- H. With respect to Coverage **C.**, and subject to Subsection **I.** and **J.**, below, the Limit of Liability identified in Item **4.c.** of the Declarations shall be the maximum reimbursement of the Insurer pursuant to this Policy with respect to all [foreign loss], [ownership loss] and [foreign subsidiary loss] for all [pollution conditions].
- I. The Total Policy and Program Aggregate Limit of Liability identified in Item **5.** of the Declarations shall be the maximum liability of the Insurer pursuant to this Policy with respect to all [claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] and [legal defence expense] for all [pollution conditions] covered pursuant to Coverages **A.**, **B.** and **C.**, or any Supplemental Coverages added by endorsement to this Policy, if any.
- J. If the Insurer or an affiliate has issued pollution liability coverage afforded on a discovered and reported basis or claims-made and reported basis consistent with Coverages **A.**, **B.** or **C.**, herein, in one or more policy periods, and a [pollution condition] is first discovered and reported to the Insurer, or a [claim], [foreign claim] or [foreign subsidiary claim] is first made and reported to the Insurer with respect to a [pollution condition] in accordance with the terms and conditions of this Policy, then:
1. Any continuous, repeated, or related [pollution condition] that is subsequently reported to the Insurer during later policy periods shall be deemed to be one [pollution condition] discovered during this [policy period] and
 2. All [claims], [foreign claims] and [foreign subsidiary claims] seeking [bodily injury], [property damage] or [remediation costs] arising out of:
 - a. That same, continuous, repeated, or related [pollution condition] that was discovered during this [policy period] or
 - b. That same, continuous, repeated, or related [pollution condition] that was the subject of a [claim], [foreign claim] or [foreign subsidiary claim] first made and reported during this [policy period] or any applicable [extended reporting period]shall be deemed to have been first made and reported during this [policy period] and no other policy shall respond.

III. DEFENCE AND SETTLEMENT

- A. The Insurer shall have the right and, subject to the [self-insured retention] obligation and Subsections **F.** and **G.**, below, the duty to defend the [insured] against a [claim], [foreign claim] or underlying matter substantiating a [foreign subsidiary claim] to which this insurance applies. The Insurer shall have no duty to defend the [insured] or indemnify the relevant [named insured] or [insured] for [legal defence expenses] consistent with Coverage **C.**, herein, and Subsection **F.** and **G.**, below, respectively, against any [claim], [foreign claim] or underlying matter



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substantiating a [foreign subsidiary claim] to which this insurance does not apply. The Insurer's duty to defend the [insured] or indemnify the relevant [named insured] or [insured] (as applicable), ends once the Limits of Liability are exhausted or are tendered into a court of applicable jurisdiction, or once the [insured] refuses a settlement offer as provided in Subsection E., below.

- B. The Insurer shall have the right to select legal counsel to represent the [insured] for the investigation, adjustment, and defence of any [claims] [foreign claims] or underlying matters substantiating any [foreign subsidiary claims] covered pursuant to this Policy. Selection of legal counsel by the Insurer shall not be done without the consent of the [insured]; such consent shall not be unreasonably withheld. [Legal defence expenses] incurred prior to the selection of legal counsel by the Insurer shall not be covered pursuant to this Policy, or credited against the [self-insured retention].

In the event the [insured] is entitled by law to select independent counsel to defend itself at the Insurer's expense, the attorney fees and all other litigation expenses the Insurer shall pay to that counsel are limited to the rates the Insurer actually pays to counsel that the Insurer normally retains in the ordinary course of business when defending [claims] or lawsuits of similar complexity in the jurisdiction where the [claim] arose or is being defended. In addition, the [insured] and the Insurer agree that the Insurer may exercise the right to require that such counsel: **1)** have certain minimum qualifications with respect to their competency, including experience in defending [claims] similar to those being asserted against the [insured]; **2)** maintain suitable errors and omissions insurance coverage; **3)** be located within a reasonable proximity to the jurisdiction of the [claim]; and **4)** agree in writing to respond in a timely manner to the Insurer's requests for information regarding the [claim]. The [insured] may at anytime, by its signed consent, freely and fully waive its right to select independent counsel.

- C. The [insured] shall have the right and the duty to retain a qualified environmental consultant to perform any investigation and or remediation of any [pollution condition] covered pursuant to this Policy. The [insured] must receive the written consent of the Insurer prior to the selection and retention of such consultant, except in the event of an [emergency response]. Any costs incurred prior to such consent shall not be covered pursuant to this Policy, or credited against the [self-insured retention] except in the event of an [emergency response].
- D. [Legal defence expenses] reduce the Limits of Liability identified in Items **2.**, **3.**, **4.** and **5.** of the Declarations to this Policy and shall be applied to the [self-insured retention].
- E. The Insurer shall present all settlement offers to the [insured]. If the Insurer recommends a settlement which is acceptable to a claimant, exceeds any applicable [self-insured retention] is within the Limits of Liability, and does not impose any additional unreasonable burdens on the [insured], and the [insured] refuses to consent to such settlement offer, then the Insurer's duty to defend, or indemnify the [insured] for [legal defence expense], shall end. Thereafter, the [insured] shall defend such [claim] [foreign claim] or underlying matter substantiating a [foreign subsidiary claim] independently and at the [insured's] own expense. The Insurer's liability shall not exceed the amount for which the [claim] [foreign claim] or underlying matter substantiating a [foreign subsidiary claim] could have been settled if the Insurer's recommendation had been accepted, exclusive of the [self-insured retention].
- F. In jurisdictions where the Insurer is not licensed or otherwise permitted to insure a [foreign subsidiary] upon receipt of a [foreign subsidiary claim] the relevant [named insured] shall enter into a written agreement with the [foreign subsidiary] regarding the handling of any [pollution condition] or [foreign subsidiary claim] for which the relevant [named insured] may have a right to indemnity, in whole or in part, pursuant to Coverage C. of this Policy. Such agreement shall require, at a minimum, that:
1. The relevant [named insured] have the right to control the investigation, adjustment, defence and settlement of any alleged [foreign subsidiary loss] consistent with the Insurer's rights in this Section III., Subsections B., C. and E., above; and
 2. The relevant [named insured] has subrogation rights consistent with the Insurer's rights in Section IX., **GENERAL CONDITIONS**, Subsection E., **Subrogation**, herein.

Thereafter, the [named insured] shall immediately assign those rights to the Insurer.



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- G. In jurisdictions where the Insurer is not licensed, and may not provide insurance or conduct the business of insurance without a license, the Insurer shall have the right, but not the duty, to defend the insured against any foreign claim made in such jurisdiction. If the Insurer elects not to defend the insured in such a scenario, the Insurer shall promptly reimburse the insured for legal defence expense that it incurs to defend itself for foreign claims to which this insurance applies. Notwithstanding anything stated in this provision, the Insurer shall maintain all of its rights to control the investigation, adjustment, defence and settlement of any alleged foreign claim consistent with Subsections B., C. and E., above.

IV. COVERAGE TERRITORY

The coverage afforded pursuant to this Policy shall apply to pollution conditions worldwide, except for any pollution conditions within:

1. The People's Republic of China; and
2. Any of the following former member states of the Union of Soviet Socialist Republics: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Notwithstanding the foregoing, this Policy shall not afford coverage for any risk which would otherwise be in violation of the laws of Canada including, but not limited to, economic or trade sanction laws or export control laws administered by the government of Canada.

V. DEFINITIONS

- A. **"Additional insured"** means any person or entity specifically endorsed onto this Policy as an additional insured if any. Such additional insured shall maintain only those rights that are specified by endorsement to this Policy.
- B. **"Biodiversity damages"** means injury to, damage sustained by, or the destruction or loss of, land, air, water, groundwater, drinking water, fish, wildlife, biota and their habitats.
- C. **"Bodily injury"** means physical injury, illness, disease, mental anguish, emotional distress, or shock, sustained by any person, including death resulting therefrom, and any prospective medical monitoring costs that are intended to confirm any such physical injury, illness or disease.
- D. **"Claim"** means the written assertion of a legal right received by the insured from a third-party, including, but not limited to, a government action, suits or other actions alleging responsibility or liability on the part of the insured for bodily injury, property damage, or remediation costs arising out of pollution conditions to which this insurance applies.
- E. **"Contingent transportation"** means the movement of the insured's waste or products by automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a covered location by a person or entity, other than an insured or foreign subsidiary engaged in the business of transporting property for hire, until such time as the waste or product is unloaded from the automobile, aircraft, watercraft, railcar or other conveyance.
- F. **"Covered location"** means:
1. Any location specifically identified in Item 9. of the Declarations to this Policy;
 2. Any location that meets the prerequisites to coverage identified in the Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any; and
 3. Any other location specifically scheduled as a covered location by endorsement attached to this Policy, if any.
- G. **"Emergency response"** means actions taken and reasonable remediation costs incurred within seventy-two (72) hours following the discovery of a pollution condition by an insured or foreign subsidiary in order to abate or respond to an imminent and substantial threat to human health or the environment arising out of such pollution condition.



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- H. **“Environmental indemnity obligations”** means an “insured’s” or “foreign subsidiary’s” obligations to defend or indemnify a third-party with respect to a “pollution condition” to which this insurance otherwise applies, provided that such defence or indemnity obligation is explicitly included within a contract identified on the Schedule of Insured Contracts Endorsement attached to this Policy, if any.
- I. **“Environmental law”** means any international (including European Union), national, federal, state, provincial, commonwealth, municipal or other local law, statute, directive, ordinance, rule, guidance document, regulation, and all amendments thereto, including voluntary cleanup or risk-based corrective action guidance, governing the liability or responsibilities of the “insured” or “foreign subsidiary” with respect to a “pollution condition.”
- J. **“Extended reporting period”** means the additional period of time in which to report a “claim,” “foreign claim” or “foreign subsidiary claim” first made against the “insured” or “foreign subsidiary” during or subsequent to the end of the “policy period.”
- K. **“First named insured”** means the person or entity as identified in Item 1. of the Declarations to this Policy. The “first named insured” is the party responsible for the payment of any premiums and the payment of, or evidencing payment of, any applicable “self-insured retention” amounts. The “first named insured” shall also serve as the sole agent on behalf of all “insureds” with respect to the provision and receipt of notices, including notice of cancellation or non-renewal, receipt and acceptance of any endorsements or any other changes to this Policy, return of any premium, assignment of any interest pursuant to this Policy, as well as the exercise of any applicable “extended reporting period” unless any such responsibilities are otherwise designated by endorsement.
- L. **“Foreign claim”** means the assertion of a legal right received by an “insured” from a third-party, including, but not limited to, suits or other actions, alleging responsibility or liability on the part of any “insured” for “foreign loss” arising out of a “pollution condition” to which Coverages A. or B. of this Policy, or any Supplemental Coverages for third-party liability added to this Policy by endorsement, would otherwise apply, which is located in a jurisdiction in which the Insurer is not licensed and the Insurer is not permitted to provide insurance without a license.
- M. **“Foreign loss”** means “claims,” “remediation costs,” and any associated “legal defence expense” or other covered loss, for which a “insured” is legally responsible for payment of, and to which Coverages A. or B. of this Policy, or any Supplemental Coverages added to this Policy by endorsement, would otherwise apply, but for the fact that the associated “pollution condition” is located in a jurisdiction in which the Insurer is not licensed and the Insurer is not permitted to provide insurance without a license with respect to the such “pollution condition.”
- N. **“Foreign subsidiary”** means:
1. The entities identified on the Schedule of Foreign Subsidiaries attached to this Policy, if any; and
 2. Any entity which would otherwise qualify as a “named insured” or “additional insured” as defined in any Broad Named Insured or Broad Additional Insured Schedule or Endorsement attached to this Policy, but for the fact that such entity is domiciled, or its principal place of business is located in a jurisdiction in which the Insurer is not licensed and the Insurer is not permitted to provide insurance to the entity without a license.
- O. **“Foreign subsidiary claim”** means a written demand made by a “foreign subsidiary” to the “first named insured” or other “named insured” seeking reimbursement or indemnification for “foreign subsidiary loss.”
- P. **“Foreign subsidiary loss”** means “claims,” “remediation costs,” and any associated “legal defence expense” or other covered loss, for which a “foreign subsidiary” is legally responsible for payment of, and to which Coverages A. or B. of this Policy, or any Supplemental Coverages added to this Policy by endorsement, would otherwise apply, but for the fact that the “foreign subsidiary” is located in a jurisdiction in which the Insurer is not licensed and the Insurer is not permitted to provide insurance without a license with respect to the related “pollution condition.”
- Q. **“Fungi”** means any form or type of mould, yeast, mushroom or mildew whether or not allergenic, pathogenic or oxygenic and any substance, vapor or gas produced by, emitted from or arising out of any “fungi” or “spore” or resultant mycotoxins, allergens or pathogens.



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- R. **“Government action”** means action taken or liability imposed by any international (including European Union), national, federal, state, commonwealth, provincial, municipal or other local government agency or body acting pursuant to the authority of [environmental law].
- S. **“Illicit abandonment”** means the intentional placement, abandonment or disposal of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, or waste materials, including [low-level radioactive waste], [mixed waste] and medical, infectious and pathological wastes, on, at or into a [covered location] by a person or entity that:
1. Is not an [insured] or [foreign subsidiary];
 2. Is not affiliated by common ownership with an [insured] or [foreign subsidiary]; and
 3. Does not maintain, or has not maintained, an ownership or operational interest in the [covered location].
- T. **“Insured”** means the [first named insured], any [named insured], any [additional insured], and any past or present director or officer of, partner in, employee of, temporary or leased worker of, or, with respect to a limited liability company, a member of, any [insured] while acting within the scope of his or her duties as such.
- Notwithstanding the foregoing, any otherwise applicable person, above, that is domiciled, or its principal place of business is located, in a jurisdiction where the Insurer is not licensed and may not insure the person without a license, shall not be an [insured] pursuant to this Policy. Instead, the Insurer agrees to indemnify the [named insured] for amounts it represents that it has a contractual or other legal obligation to indemnify such person for sums that the person is legally obligated to pay for [bodily injury], [property damage] and [remediation costs], including associated [legal defence expense], consistent with the indemnity coverage afforded to [named insureds] with respect to [foreign subsidiary loss] pursuant to Section I., **INSURING AGREEMENTS**, Subsection C., **FOREIGN POLLUTION CONDITIONS**, Paragraph 2., of this Policy.
- U. **“Legal defence expense”** means reasonable legal costs, charges, and expenses, including expert charges, incurred by the [insured] or [foreign subsidiary] in the investigation, adjustment or defence of [claims], [foreign claims] or underlying matters substantiating [foreign subsidiary claims].
- V. **“Low-level radioactive waste”** means waste that is radioactive but not classified as the following: high-level waste (spent nuclear fuel or the highly radioactive waste produced if spent fuel is reprocessed), uranium milling residues, and waste with greater than specified quantities of elements heavier than uranium.
- W. **“Mixed waste”** means:
1. Waste containing both radioactive and hazardous components as defined pursuant to United States law within the Atomic Energy Act and the Resource Conservation and Recovery Act, as either may be amended; and
 2. Waste containing both radioactive and hazardous components that is located in any other jurisdiction to the extent that such waste would be subject to the laws of the United States of American, above, if the waste was physically located there.
- X. **“Named insured”** means any person or entity specifically endorsed onto this Policy as a [named insured], if any. Such [named insured] shall maintain the same rights pursuant to this Policy as the [first named insured], except for those rights specifically reserved to the [first named insured] that are identified in Subsection K., above.
- Y. **“Natural resource damage”** means injury to, destruction of, or loss of, including the resulting loss of value of, fish, wildlife, biota, land, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by Canada or the United States (including the resources of the exclusive economic zone and continental shelf of Canada as established by the Oceans Act, S.C. 1996, c.31 and the fishery conservation zone established by the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et. seq.)), any state or local government, any foreign government, or any First Nations or Native American Tribe, or, if such resources are subject to a trust restriction on alienation, any members of any First Nations or Native American Tribe, including the reasonable costs of assessing such injury, destruction or loss resulting therefrom.



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- Z. “Non-owned disposal site”** means any disposal site or recycling facility not owned or operated by an insured or foreign subsidiary which receives, or has historically received, an insured or foreign subsidiary waste.
- AA. “Ownership interest”** means the percentage ownership interest that the named insured has in its foreign subsidiary prior to, and at the time of, the named insured’s discovery of the pollution condition, or its discovery of the underlying matter substantiating the foreign subsidiary claim with respect to the pollution condition, whichever occurs first.
- BB. “Ownership loss”** means the named insured’s ownership interest in the foreign subsidiary multiplied by the amount of the foreign subsidiary loss.
- CC. “Policy period”** means:
1. The period of time specifically identified in Item 2.a. of the Declarations to this Policy for Coverage A., Item 3.a. of the Declarations to this Policy for Coverage B. and or Item 4.a. of the Declarations to this Policy for Coverage C.;
 2. With respect to covered locations added pursuant to the Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, the period of time following the closing date of the acquisition transaction or the effective date of the lease, as applicable, through the applicable expiration date of the Policy identified in Item 2.a., 3.a. or 4.a. of the Declarations to this Policy with respect to New Pollution Conditions Coverage, Pre-Existing Pollution Conditions Coverage and Foreign Pollution Conditions Coverage, respectively; or
 3. Any shorter period resulting from the cancellation of this Policy.
- DD. “Pollution condition”** means:
1. The presence of fungi or *legionella pneumophila*;
 2. Illicit abandonment; or
 3. The discharge, dispersal, release, escape, migration, or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, or waste materials, on, in, into, or upon land and structures thereupon, the atmosphere, surface water, or groundwater. For the purpose of this definition, waste materials include, but are not limited to, low-level radioactive waste and mixed waste.
- EE. “Property damage”** means:
1. Physical injury to, or destruction of, tangible property of a third-party, including all resulting loss of use of that property;
 2. Loss of use of tangible property of a third-party, that is not physically injured or destroyed;
 3. Diminished value of tangible property owned by a third-party;
 4. Natural resource damages; or
 5. With respect to pollution conditions located within the European Union, biodiversity damages.
- FF. “Registered occupational hygienist”** means a certified professional, as established by the Canadian Registration Board of Occupational Hygienists (or its functional equivalent in any foreign jurisdiction), that is:
1. Mutually agreed upon by the Insurer and the insured; and
 2. Qualified by knowledge, skill, education and training to perform an assessment of the fungal or bacterial ecology of a property, building systems and or contents, prepare an investigation protocol, interpret the results and prepare a scope of work to remediate the site to an ordinary ambient indoor air ecology for similar indoor environments.
- The Insurer may also exercise the right to require that such “registered occupational hygienist” have certain minimum qualifications with respect to their competency, including experience with similar fungi or *legionella pneumophila* remediation projects.



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GG. “Remediation costs” means reasonable expenses incurred to investigate, quantify, monitor, mitigate, abate, remove, dispose, treat, neutralize, or immobilize a [pollution condition] that is required:

1. In order to meet the [standards] for [pollution conditions] applicable to the existing use of the [covered location];
2. Pursuant to the entry of a [covered location] into a voluntary cleanup program that has been sanctioned or approved by the national, federal, provincial, state or local government ministry, department or agency with jurisdiction over the [pollution condition]; or
3. Pursuant to any other written order or direction received by an [insured] from any court, or national, federal, provincial, state or local government ministry, department or agency, with jurisdiction over the [pollution condition].

If no applicable [standards] exist that govern the remediation of [fungi] or *legionella pneumophila* in the jurisdiction of the [covered location], necessary "remediation costs" may be established by securing the written professional recommendations of a [registered occupational hygienist] retained with the prior approval of the Insurer.

“Remediation costs” shall also include:

1. Reasonable legal cost, where such cost has been incurred by an [insured] or [foreign subsidiary] with the written consent of the Insurer; and
2. Reasonable expenses required to restore, repair or replace real or personal property, to substantially the same condition it was in prior to being damaged during the course of responding to a [pollution condition].

HH. “Responsible person” means any employee of an [insured] responsible for environmental affairs, control, or compliance at a [covered location], and any officer or director of, or partner in, an [insured] or [foreign subsidiary].

II. “Self-insured retention” means the dollar amount identified in Item 2.d. of the Declarations to this Policy for Coverage A., Item 3.d. of the Declarations to this Policy for Coverage B. and or Item 4.d. of the Declarations to this Policy for Coverage C., or as otherwise designated by endorsement to this Policy, if any.

JJ. “Spore” means any reproductive particle or microscopic fragment produced by, emitted from or arising out of any [fungi].

KK. “Standards” means published standards or cleanup guidelines established pursuant to federal, provincial or local laws, regulations or statutes, or any subsequent amendments thereof, that govern response actions to [pollution conditions]. [Standards] shall not include any standard established by the [insured] pursuant to a risk assessment or site-specific risk assessment completed in compliance with federal, provincial or local laws, regulations or statutes, until such time as the federal, provincial or local government ministry, department or agency with jurisdiction over the [pollution condition] has authorized any such standard in a writing directed to the [insured] or [foreign subsidiary].

LL. “Terrorism” means activities against persons, organizations or property of any nature:

1. That involve the following or preparation for the following:
 - a. Use or threat of force or violence; or
 - b. Commission or threat of a dangerous act; or
 - c. Commission or threat of an act that interferes with or disrupts an electronic, communication, information, or mechanical system; and
2. When one or both of the following applies:
 - a. The effect is to intimidate or coerce a government or the civilian population or any segment thereof, or to disrupt any segment of the economy; or
 - b. It appears that the intent is to intimidate or coerce a government, or to further political, ideological, religious, social or economic objectives or to express (or express opposition to) a philosophy or ideology.



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- MM.** “Underground storage tank” means any tank and associated piping and appurtenances connected thereto which tank has more than ten percent (10 %) of its volume below ground. “Underground storage tank” does not mean a septic tank or oil water separator.
- NN.** “War” means war, whether or not declared, civil war, martial law, insurrection, revolution, invasion, bombardment or any use of military force, usurped power or confiscation, nationalization or damage of property by any government, military or other authority.

VI. EXCLUSIONS

This insurance shall not apply to:

A. Asbestos

“Claims”, “remediation costs”, “foreign loss”, “ownership loss”, “foreign subsidiary loss” or “legal defence expenses” arising out of or related to asbestos or asbestos-containing materials.

This exclusion shall not apply to “remediation costs” arising out of asbestos or asbestos-containing materials discovered in soil or groundwater.

B. Claims Against Foreign Subsidiaries

Underlying “claims” or associated “legal defence expenses” made directly against any “foreign subsidiary”. This exclusion shall not apply to “foreign subsidiary claims” made against a “named insured” that are otherwise covered pursuant to Coverage C. of this Policy.

Notwithstanding, this insurance shall not apply to any “foreign subsidiary claim” alleging, based upon, arising out of, or attributable to, any claim, suit, action, loss, or act, error or omission, which would have been excluded if made against or incurred by an “insured” pursuant to Coverages A. or B., or any Supplemental Coverages added to this Policy by endorsement.

C. Contractual Liability

“Claims”, “remediation costs”, “foreign loss”, “ownership loss”, “foreign subsidiary loss” or “legal defence expenses” arising out of or related to liability of others assumed by any “insured” or “foreign subsidiary” through contract or agreement, except if the liability would have attached to the “insured” or “foreign subsidiary” in the absence of such contract or agreement.

This exclusion shall not apply to:

1. “Environmental indemnity obligations” and
2. “Foreign subsidiary claims” premised upon liability of a “foreign subsidiary” assumed by a “named insured” through a contract or agreement to which Coverage C. of this Policy applies.

D. Divested Property

“Claims”, “remediation costs”, “foreign loss”, “ownership loss”, “foreign subsidiary loss” or “legal defence expenses” arising out of or related to a “pollution condition” on, at, under or migrating from a “covered location” when such “pollution condition” first commenced after the “covered location” had been sold, abandoned, or given away by any “insured” or “foreign subsidiary” or was condemned.

This exclusion shall not apply to Coverage B. and any corresponding foreign coverage provided pursuant to Coverage C.

E. Employers Liability

“Claims”, “foreign loss”, “ownership loss”, “foreign subsidiary loss” or “legal defence expenses” arising out of or related to “bodily injury” to:

1. Any “insured” or any employee of its parent corporation, “foreign subsidiary”, subsidiary or affiliate:



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

- a. Arising out of, or in the course of, employment by any [insured] or its parent corporation, [foreign subsidiary] subsidiary or affiliate; or
 - b. Performing duties related to the conduct of the business of any [insured] or its parent corporation, [foreign subsidiary], subsidiary or affiliate.
2. The spouse, child, parent, brother or sister of any [insured] or employee of its parent corporation, [foreign subsidiary] subsidiary or affiliate as a consequence of Paragraph 1., above.

This exclusion applies:

1. Whether an [insured] or [foreign subsidiary] may be liable as an employer or in any other capacity; and
2. To any obligation to share damages with or repay someone else who must pay damages because of such [bodily injury]

F. Fines and Penalties

Payment of criminal fines, criminal penalties, punitive, exemplary or multiplied damages, or any associated [claims] seeking exclusively injunctive relief in addition to such fines, penalties or damages.

This exclusion also applies to any [legal defence expense] associated with such fines and penalties.

This exclusion shall not apply to punitive or exemplary damages where such coverage is insurable by law.

G. First-Party Property Damage

[Claims], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to damage to real or personal property owned by, leased to, loaned to, or rented by any [insured] or [foreign subsidiary] or otherwise in the care, custody, or control of any [insured] or [foreign subsidiary]

This exclusion shall not apply to [remediation costs]

H. Fraud or Misrepresentation

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to:

1. Fraudulent acts or material misrepresentations on the part of the [first named insured] made:
 - a. Within the Application to this Policy; or
 - b. During the Application or underwriting process prior to the inception date identified in Item 2.a., 3.a. or 4.a. of the Declarations to this Policy, as applicable, which would have affected the Insurer's decision to either issue this Policy, or issue this Policy and its endorsements pursuant to the financial terms identified in the Declarations to this Policy; or
2. Fraudulent acts or material misrepresentations on the part of any [responsible person] during the [policy period]

I. Insured's Internal Expenses

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to expenses incurred by any [insured] or [foreign subsidiary] for services performed by its salaried staff and any employees.

This exclusion shall not apply to [emergency response] or any costs, charges or expenses incurred with the prior written approval of the Insurer at its sole discretion.

J. Insured vs. Insured

[Claims] made by any [insured] or [foreign subsidiary] against any other [insured] or [foreign subsidiary]



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

This exclusion shall not apply to [foreign subsidiary claims] premised upon liability of a [foreign subsidiary] for which a [named insured] has a legal obligation to reimburse such [foreign subsidiary] as contemplated within Coverage C. of this Policy.

K. Intentional Non-Compliance

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to the intentional disregard of, or knowing, willful, or deliberate non-compliance with, any law, statute, regulation, administrative complaint, notice of violation, notice letter, instruction of any governmental agency or body, or executive, judicial or administrative order by any [responsible person]

L. Known Conditions

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to [pollution conditions] in existence and reported to a [responsible person]

1. Prior to the [policy period] or
2. With respect to [covered location] acquired or leased by a [named insured] or [foreign subsidiary] and added to the Policy during the [policy period] pursuant to an Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, prior to the closing date of the acquisition or effective date of the lease of such [covered locations]

including any [pollution conditions] discovered during the normal course of further investigation or remediation of such reported [pollution conditions]

This exclusion shall not apply to:

1. [Pollution conditions] specifically referenced in, or identified in documents listed on, the Schedule of Known Conditions Endorsement attached to this Policy, if any; or
2. [Pollution conditions] that have been reported to the [responsible person] as not being actionable pursuant to [environmental law] in any Phase I or Phase II Environmental Site Assessment report (or its functional equivalent with respect to any [covered location] situated in a jurisdiction outside of Canada or the United States of America) specifically prepared for a [named insured] or [foreign subsidiary] by a qualified environmental consultant. To the extent that the qualified consultant's actionability determination is premised, in whole or in part, on the use of institutional or engineering controls in effect at a [covered location], any coverage afforded pursuant to this paragraph shall be contingent upon:
 1. The continued maintenance of said engineering controls; and
 2. The continued use of the property in a manner consistent with the consultant's reported assumptions, during the [policy period]

M. Lead-Based Paint

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to lead-based paint.

This exclusion shall not apply to [remediation costs] arising out of lead-based paint discovered in soil or groundwater.

N. Material Change in Risk

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to a change in the use or operations at a [covered location] that materially increases the likelihood or severity of a [pollution condition] or [claim] from the intended uses or operations identified:

1. By the [first named insured] for the Insurer in the Application and accompanying underwriting materials provided prior to the inception date identified in Item 2.a., 3.a. or 4.a. of the Declarations to this Policy, as applicable; or



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

2. With respect to [covered locations] added to the Policy pursuant to the Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any, as part of the due diligence materials and supplemental underwriting materials provided to the Insurer as part of the notice required pursuant to that endorsement.

This exclusion shall only apply to the [covered location] associated with the change in use or operations and shall not limit coverage for other [covered locations] to which this insurance applies.

O. Naturally Occurring Materials

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to the presence or removal of naturally occurring materials.

This exclusion shall not apply in those circumstances where naturally occurring substances are present at a [covered location] as a result of human activities or human processes.

P. Non-Owned Disposal Sites

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to [pollution conditions] on, at, under or migrating from a [non-owned disposal site].

This exclusion shall not apply to any [non-owned disposal site] specifically identified on a Schedule of Non-Owned Disposal Sites Endorsement attached to this Policy, if any.

Q. Underground Storage Tanks

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to [pollution conditions] emanating from an [underground storage tank] located at a [covered location] when the existence of such [underground storage tank] was known to a [responsible person] prior to the [policy period] and

1. The [underground storage tank] is not identified on the Schedule of Insured Underground Storage Tanks Endorsement attached to this Policy, if any; or
2. The [underground storage tank] has been closed or removed, and is not identified on the Schedule of Known Conditions Endorsement attached to this Policy, if any.

R. Vehicles

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to [pollution conditions] resulting from the use, maintenance or operation, including loading or unloading, of an automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a [covered location].

This exclusion shall not apply to [contingent transportation] if such coverage is added to this Policy by endorsement.

S. War or Terrorism

[Claims], [remediation costs], [foreign loss], [ownership loss], [foreign subsidiary loss] or [legal defence expenses] arising out of or related to [pollution conditions] attributable, whether directly or indirectly, to any acts that involve, or that involve preparation for, [war] or [terrorism] regardless of any other cause or event that contributes concurrently or in any sequence to the injury or damage.



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

VII. REPORTING AND COOPERATION

A. It is a condition precedent to coverage pursuant to this Policy that the insured provides the Insurer with written notice of any claim, foreign claim, foreign subsidiary claim or pollution condition as soon as practicable, at the address identified in Item 8.a. of the Declarations to this Policy. Notice should include reasonably detailed information as to:

1. The identity of the insured and foreign subsidiary, including contact information for an appropriate person to contact regarding the handling of the claim, foreign claim, foreign subsidiary claim or pollution condition;
2. The identity of the covered location;
3. The nature of the claim, foreign claim, foreign subsidiary claim or pollution condition; and
4. Any steps undertaken by the insured or foreign subsidiary to respond to the claim, foreign claim, foreign subsidiary claim or pollution condition.

In the event of a pollution condition, it is also a condition precedent to coverage that the insured and or foreign subsidiary take all reasonable measures to provide immediate verbal notice to the Insurer.

B. It is a condition precedent to coverage pursuant to this Policy that the insured:

1. As soon as practicable, send the Insurer copies of any demands, notices, writs of summons, statements of claim, petitions or other originating legal process received in connection with any claim, foreign claim or foreign subsidiary claim;
2. Authorize the Insurer to obtain records and other information;
3. Cooperate with the Insurer in the investigation, settlement or defence of the claim, foreign claim or foreign subsidiary claim;
4. Assist the Insurer, upon the Insurer's request, in the enforcement of any right against any person or organization which may be liable to the insured or a foreign subsidiary because of bodily injury, property damage, remediation costs, foreign loss, ownership loss, foreign subsidiary loss or legal defence expense to which this Policy may apply; and
5. Provide the Insurer with such information and cooperation as it may reasonably require.

C. No insured or foreign subsidiary shall make or authorize an admission of liability or attempt to settle or otherwise dispose of any claim, foreign claim or underlying matter substantiating any foreign subsidiary claim without the written consent of the Insurer. Nor shall any insured retain any consultants or incur any remediation costs without the prior express written consent of the Insurer, except in the event of an emergency response.

D. Upon the discovery of a pollution condition, the insured and or foreign subsidiary shall make every attempt to mitigate any loss and comply with applicable environmental law. The Insurer shall have the right, but not the duty, to mitigate such pollution conditions if, in the sole judgment of the Insurer, the insured and or foreign subsidiary fails to take reasonable steps to do so. In that event, any remediation costs incurred by the Insurer shall be deemed incurred by the insured and shall be subject to the self-insured retention and Limits of Liability identified in the Declarations to this Policy.

VIII. EXTENDED REPORTING PERIOD

A. The first named insured shall be entitled to a basic extended reporting period and may purchase an optional supplemental extended reporting period following Cancellation, as described in Subsection A., Paragraph 1. of Section IX., GENERAL CONDITIONS, or nonrenewal.



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

- B. Extended reporting periods shall not reinstate or increase any of the Limits of Liability. Extended reporting periods shall not extend the policy period or change the scope of coverage provided. A claim, foreign claim or foreign subsidiary claim first made against an insured and reported to the Insurer within the basic extended reporting period or supplemental extended reporting period, whichever is applicable, shall be deemed to have been made and reported on the last day of the policy period.
- C. Provided the first named insured has not purchased any other insurance to replace this Policy, the first named insured shall have a sixty (60) day basic extended reporting period without additional charge.
- D. Provided the first named insured has not purchased any other insurance to replace this Policy, the first named insured shall also be entitled to purchase a supplemental extended reporting period of up to thirty-four (34) months for not more than two hundred percent (200%) of the full premium identified in Item 6. of the Declarations to this Policy, and any additional premiums resulting from coverage added during the policy period. Such supplemental extended reporting period starts when the basic extended reporting period ends. The Insurer shall issue an endorsement providing a supplemental extended reporting period provided that the first named insured
1. Makes a written request, to the address identified in Item 8.b. of the Declarations to this Policy, for such endorsement which the Insurer receives prior to the expiration of the policy period; and
 2. Pays the additional premium when due. If that additional premium is paid when due, the supplemental extended reporting period may not be cancelled, provided that all other terms and conditions of the Policy are met.

IX. GENERAL CONDITIONS

A. Cancellation

1. This Policy may be cancelled only by the first named insured or through the first named insured's agent, by mailing to the Insurer at the address identified in Item 8.b. of the Declarations to this Policy, written notice stating when such cancellation shall be effective.
2. This Policy may be cancelled by the Insurer for the following reasons:

- a. Non-payment of premium; or
- b. Fraud or material misrepresentation on the part of any insured or foreign subsidiary;

by mailing to the first named insured at the first named insured's last known address, written notice stating when, not less than sixty (60) days thereafter, fifteen (15) days if cancellation is for non-payment of any unpaid portion of the premium, such cancellation shall be effective. The mailing of notice shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall be the end of the policy period.

Subparagraph 2.b., herein, shall apply only to that insured that engages in the fraud or misrepresentation. This exception shall not apply to any insured who is a parent corporation, subsidiary, employer of, or otherwise affiliated by ownership with, such insured including the relevant named insured in the event that the implicated entity is a foreign subsidiary.

3. In the event of cancellation, the premium percentage identified in Item 6. of the Declarations to this Policy shall be the minimum-earned premium upon the inception date identified in Item 2.a. of the Declarations to this Policy. Thereafter, the remaining unearned premium, if any, shall be deemed earned by the Insurer on a *pro rata* basis over the remainder of the policy period. Any unearned premium amounts due the first named insured upon cancellation of this Policy shall be calculated on a *pro rata* basis and refunded within thirty (30) days of the effective date of cancellation.

B. Inspection and Audit



Global Premises Pollution Liability Insurance Policy (claims-made coverage)

To the extent of the insured's or foreign subsidiary's ability to provide such access, and with reasonable notice to the insured, the Insurer shall be permitted, but not obligated, to inspect and sample the covered locations. The insured shall have the concurrent right to collect split samples. Neither the Insurer's right to make inspections, the making of said inspections, nor any report thereon shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that such property or operations are safe or in compliance with environmental law or any other law.

The Insurer may examine and audit the insured's books and records during this policy period and extensions thereof and within three (3) years after the final termination of this Policy.

C. Legal Action Against the Insurer

No person or organization other than an insured has a right pursuant to this Policy:

1. To join the Insurer as a party or otherwise bring the Insurer into a suit against any insured or foreign subsidiary or
2. To sue the Insurer in connection with this insurance unless all of the Policy terms have been fully complied with.

D. Bankruptcy

The insolvency or bankruptcy of any insured or foreign subsidiary or any insured's or foreign subsidiary's estate, shall not relieve the Insurer of its obligations pursuant to this Policy. However, any such insolvency or bankruptcy of the insured or foreign subsidiary or the insured's or foreign subsidiary's estate, shall not relieve the insured of its self-insured retention obligations pursuant to this Policy. This insurance shall not replace any other insurance to which this Policy is excess, nor shall this Policy drop down to be primary, in the event of the insolvency or bankruptcy of any underlying insurer.

E. Subrogation

In the event of any payment pursuant to this Policy by the Insurer, the Insurer shall be subrogated to all of the rights of recovery against any person or organization, and the insured shall, and shall cause all foreign subsidiaries to, execute and deliver instruments and papers and do whatever else is necessary to secure such rights. All insureds and foreign subsidiaries shall do nothing to prejudice such rights. Any recovery as a result of subrogation proceedings arising pursuant to this Policy shall accrue first to the "insureds" to the extent of any payments in excess of the limit of coverage; then to the Insurer to the extent of its payment pursuant to the Policy; and then to the "insured" to the extent of the self-insured retention. Expenses incurred in such subrogation proceedings shall be apportioned among the interested parties in the recovery in the proportion that each interested party's share in the recovery bears to the total recovery.

F. Representations

By accepting this Policy, the first named insured agrees that:

1. The statements in the Declarations, schedules and endorsements to, and Application for, this Policy are accurate and complete;
2. Those statements and representations constitute warranties that the first named insured made to the Insurer; and
3. This Policy has been issued in reliance upon the first named insured's warranties.

G. Separation of Insureds

Except with respect to the Limits of Liability, Cancellation condition 2.a., above, the Fraud or Misrepresentation Exclusion, the Insured vs. Insured Exclusion, the Intentional Non-Compliance Exclusion, the Known Conditions Exclusion, the Material Change in Risk Exclusion, the Underground Storage Tanks Exclusion, and any obligations specifically assigned to the first named insured, this Policy applies:



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1. As if each [named insured] were the only [insured] and
2. Separately to each [named insured] against whom a [claim] is made.

H. Other Insurance

If other valid and collectible insurance is available to any [insured] or [foreign subsidiary] covering a loss also covered by this Policy, other than a policy that is specifically written to apply in excess of this Policy, the insurance afforded by this Policy shall apply in excess of and shall not contribute with such other insurance.

I. Jurisdiction and Venue

It is agreed that in the event of the failure of the Insurer to pay any amount claimed to be due hereunder, the Insurer and the [insured] shall submit to the exclusive jurisdiction of the Province of Ontario and shall comply with all requirements necessary to give an Ontario court such jurisdiction. Further, it is also agreed that there is no concurrent jurisdiction in any court outside of the Province of Ontario.

J. Choice of Law

All matters arising hereunder, including questions relating to the validity, interpretation, performance, and enforcement of this Policy, and the rights, duties and obligations hereunder, shall be determined in accordance with the law and practices of the Province of Ontario.

K. Proof of Insurance in Foreign Jurisdictions

This Policy shall not serve as proof of insurance in any country where non-admitted insurance is prohibited by local applicable law.

L. Changes and Assignment

Notice to or knowledge possessed by any person shall not effect waiver or change in any part of this Policy or estop the Insurer from asserting any right pursuant to the terms of this Policy. The terms, definitions, conditions, exclusions and limitations of this Policy shall not be waived or changed, and no assignment of any interest in this Policy shall bind the Insurer, except as provided by endorsement and attached to this Policy.

M. Headings

The descriptions in the headings and sub-headings of this Policy are inserted solely for convenience and do not constitute any part of the terms or conditions hereof.

N. Consent

Where the consent of the Insurer, or an [insured] is required pursuant to this Policy, such consent shall not be unreasonably withheld, delayed, conditioned, or denied.

O. Currency

Payments made by the Insurer pursuant to this Policy shall be made in the same currency as the Limits of Liability identified in the Declarations to this Policy. At the Insurer's sole option, and upon any [insured]'s request, the Insurer may choose to pay any sums due pursuant to this Policy in any relevant currency. When any such payment involves a currency other than that of the Limits of Liability of this Policy, the Insurer shall convert the value of the payment from the currency of the Limits of Liability of this Policy, using the free rate of exchange as published in *The Wall Street Journal* in effect at the end of the last business day preceding the date of settlement of the loss. Once the Insurer makes any such conversion from another currency, the Insurer shall apply all of the other terms and conditions of this Policy to determine the final amount of its payment obligation.



SCHEDULE OF ADDITIONAL INSURED(S) (Broad) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 1
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

- I. The persons or entities within the scope of the description contained in the Schedule of Additional Insureds, below, are additional insureds pursuant to this Policy, but solely: **1)** with respect to their vicarious liability arising out of any named insureds or foreign subsidiarys direct liability for a pollution condition on, at under or migrating from a covered location to which this insurance applies; and **2)** to the extent that such person or entity is domiciled or its principle place of business is located in Canada or another jurisdiction where the Insurer is either licensed or legally permitted to provide insurance without a license.
- II. In the event that any person or entity inadvertently identified within the scope of the description contained in the Schedule of Additional Insureds, below, is domiciled or its principle place of business is located in a jurisdiction where the Insurer is not licensed and may not provide insurance without a license, such person or entity shall not be an additional insured pursuant to this Policy. Instead, the Insurer agrees to indemnify the relevant named insured for its ownership interest in, or amounts that the relevant named insured represents that it has a contractual or other legal obligation to: **1)** indemnify such person or entity for which they or it, respectively, have an underlying legal obligation to pay for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location; or **2)** secure insurance coverage for such person or entity for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location, consistent with the indemnity coverage afforded to relevant named insureds with respect to foreign subsidiaries pursuant to Section I., **INSURING AGREEMENTS**, Subsection C., FOREIGN POLLUTION CONDITIONS, of this Policy.

Schedule of Additional Insureds

1. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, other than joint ventures and general partnerships, as now or may hereinafter exist during the policy period, in which a named insured maintains an ownership interest; and
2. All joint ventures or general partnerships, as now or may hereinafter exist during the policy period to which a named insured is a party, as now or may hereinafter exist during the policy period, but only to the extent of the named insureds legal responsibility for the vicarious liability of such joint venture or general partnership.

All other terms and conditions of this Policy remain unchanged.



SCHEDULE OF COVERED LOCATIONS (Coverages A. and/or B. – Retroactive Date) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 2
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

- I. Coverage is afforded pursuant to this Policy for the covered locations identified in the Schedule of Covered Locations, below, but solely with respect to the respective Coverage Parts indicated therewith, and any corresponding coverage provided pursuant to Coverage C. of this Policy.

#	<u>SCHEDULE OF COVERED LOCATIONS</u>	<u>COVERAGE PROVIDED</u> <u>COVERAGE A.</u> <u>AND/OR B.</u>	<u>RETROACTIVE DATE</u>
230	120 Merindale Drive, Croydon South, Victoria Australia 3136	A and B	None
221	19 Railway Terrace, Nuriootpa, SA, Australia	A and B	None
158	Riedstrasse 2, A-6845, Hohenems, Austria	A and B	None
231	Schwefelbadstrasse 1, A-6845 Hohenems, Austria	A and B	None
200	Werner-Heisenberg Strasse 6, 9100 Voelkermarkt, Kaernten, Austria	A and B	None
203	R: Antonio Dar Street, 480 Criciúma, Santa Catarina (SC), Brazil	A and B	None
194	Rodovia Vinhedo Viracopos, Km79 - Santa Cándida, Vinhedo - São Paulo, Brazil	A and B	None



232	Rodovia Vinhedo Viracopos, Km79 □ Santa C�ndida, Vinhedo □ S �o Paulo, BrazilVinhedo, Brazil next door to current location	A and B	None
40	163 Robert Street East, Penetanguishene, Ontario	A and B	None
36	35 McLachlan Drive, Etobicoke, Ontario	A and B	None
31	Yongfeng Road	A and B	None
216	Lot nos. 2,110,852 and 2,228,906 located in the bourrough of St. Bruno de Montarville, Town of Longueuil, Quebec	A and B	None
233	Cross of XinYe Nine Street and XinSheng Road, West TEDA, Tianjin, 300457, P.R. China	A and B	None
184	Gengyun Rd., Hefei Economic Technological Development Zone, 230601 Hefei, Anhui Province, China	A and B	None
179	Hongqi Road, Parcel YH-LI-3 Yong He section of the Guangzhou Economic and Technological Development District, Guangdong Province, Peoples Republic of China	A and B	None
166	Bjergfruevej 4, Vaeggerloese, Marielyst, Denmark	A and B	None
161	Nyager 11 □ 13, 2605 Br�ndby, Denmark	A and B	None
162	Nyager 15 □ 17, 2605 Br�ndby, Denmark	A and B	None
167	Tjaerbyvej 90, 8900 Randers, Denmark	A and B	None
160	20 rue Louis Arago, 91380 Chilly-Mazarin Cedex, France	A and B	None
197	34 route de Longjumeau, 91380 Chilly-Mazarin,	A and B	None



	France		
225	4 5, rue Descartes, 41350 Vineuil France	A and B	None
235	Le Parc De Geneve, RN 6 Lot No 9B, 69800 Saint Priest, France (Lyon)	A and B	None
206	Parcelle ZL66, ZA La Barogne, Moussy-Le-Neuf, 77230 France	A and B	None
183	Val d'Atur, F-24759 Trilissac (Perigueux), France	A and B	None
182	Bröckenweg 5, D-08393 Meerane, Germany	A and B	None
218	CD-Design G.m.b.H, Lindgesfeld 26, 42653 Solingen, Germany	A and B	None
224	Eltex, Lindgesfeld 27, 42653 Solingen, Germany	A and B	None
181	Industriestrasse 2, D-08607 Holzkirchen, Germany	A and B	None
193	Via del Commercio, 2 20049 Concorezzo, Milano, Italy	A and B	None
214	1-27-10 Taito, Taido-Ku, Tokyo Japan 110-0000	A and B	None
134	Avenida de la Luz No. 85 Fracc. Parque Industrial, La Luz, Cuautitlan, Izcalli, Mexico	A and B	None
199	FINSA Industrial Park, Lots 21 and 23, Avenida Michoacan No. 20, Colonia Renovacion, Delegacion Iztapalapa, DF 09209, Mexico	A and B	None
207	San Jeronimo, Fed Hwy. 57, San Jose de Iturbide, Guanajuato, Mexico	A and B	None
192	I Jsselstraat 15, 5347 KG Oss, Netherlands	A and B	None



178	ul. Kierska-Kiekrz, 60-480 Rokietnica, Poland	A and B	None
169	Box 407, Morby Centrum, S-182 14 Danderyd, Sweden	A and B	None
240	Köpmansgatan 13, 26933 Bastad, Sverige	A and B	None
155	69 Moo 5, Wellgrow Industrial Estate, Bangna Road, Km 36, Bangsamak Sub-district, Bangpakong District, Chachoengsao Province, Thailand known as BK1	A and B	None
242	69 2 Moo 5 Wellgrow Industrial Estate, Bangna-Trad Road, Km. 36, Bangsamak Subdistrict, Bangpakong District, Chachoengsap province known as BKII	A and B	None
219	87 Moo 5 Wellgrow Industrial Estate, Bangna-Trad Km. 36, Chachoengsao 24130, Thailand.	A and B	None
246	BKK III 69 2 Moo.5 Wellgrow Industrial Estate, Bangna-Trad Km. 36, Bangsamark, Bangpakong, Chachoengsao, 24180, Thailand property next door to BKII known as BKIII	A and B	None
196	10 Cairn Court, East Kilbride, Lanarkshire, Scotland G74 4NB	A and B	None
204	Hardwick Industrial Estate, Kings Lynn, North Norfolk, UK	A and B	None
177	Unit 3, Pioneer Way, Castleford, West Yorkshire, WF10 5QU	A and B	None
202	Unit 6, Pioneer Business Park, Whitwood, Wakefield, West Yorkshire, United Kingdom WF10 5QU	A and B	None
191	Unit G, Foster Road, Ashford Business Park, Sevington, Ashford, Kent TN24 0SH United Kingdom	A and B	None



74	1 Llodio Drive, Hermitage, PA U.S.A.	A and B	None
67	1187 Industrial Rd., Cold Spring, KY 41076 (aka 300 Industrial Rd.)	A and B	None
68	1191 Industrial Rd., Bldg. 2, Cold Spring KY 41076 (aka 400 Industrial Rd.)	A and B	None
101	120 Stockton St., Hightstown, NJ 08520 U.S.A.	A and B	None
108	1200 W. Bailey St., Sioux Falls, S.D. U.S.A.	A and B	None
107	1209 W. Bailey St., Sioux Falls, S.D. U.S.A.	A and B	None
56	15 Controls Dr., Shelton, Connecticut, 06484-0511 U.S.A.	A and B	None
213	161 Worcester Rd., Suite 410, Framingham, MA 01701	A and B	None
156	1831 D Portal St., Baltimore, MD 21224	A and B	None
241	1862-1864 Suncast Lane, Batavia, IL	A and B	None
188	208 Spring Drive, St. Charles, MO 63303	A and B	None
77	235 Martin Rd., Cumberland, RI U.S.A.	A and B	None
245	2511 NW 30th Ave, Portland, OR	A and B	None
243	308 Rogers Lane, Raleigh, North Carolina 27610	A and B	None
114	4000 Westinghouse Blvd., Charlotte, NC 28273 U.S.A.	A and B	None
153	576 College Commerce Way, Upland, California 91786-4377	A and B	None



198	670 Progress Road, Collierville (Memphis), Tennessee	A and B	None
142	Lot 2, Cidra Industrial Subdivision, Cidra, Puerto Rico	A and B	None
186	North Gold Industrial Park, 104 North Gold Drive, Robbinsville, NJ	A and B	None
150	One Lasley Avenue, Wilkes-Barre, Pennsylvania 18706	A and B	None
157	RD 102, KM 3.2, Calle B, El Retiro Industrial Park, San German, Puerto Rico 00683	A and B	None
229	Watson Land Co., 2250 East 220th Street, Building 220 Carson CA	A and B	None
215	No.8 VSIPII, Street No.6, Vietnam Singapore Industrial Park II, Binh Duong Industry-Service-Urban Complex, Ben Cat District Binh Duong Province, Vietnam	A and B	None
247	21481, Unit 15, 8th Street East Sonoma, CA 95476	A and B	None
248	1F 2-2-16 Higashiobase, Higasji Nariku, Osaka city, Osaka, Japan	A and B	None
249	Unit 4, 1A Bessemer Street, Blacktown, Australia	A and B	None
250	Unit 7, 415-443 West Botany Street, Rockdale, NSW 2216	A and B	None
251	Carl-Zeiss-Str.3-5, Garching b. Munchen Germany 85748	A and B	None
252	269 Fleming Road, Meadowvale, Joahnnesburg, South Africa	A and B	None



253	Carmelray Industrial Park, Laguna, Philippines	A and B	None
254	Via Canova 40 42, Lainate, Milano Italy	A and B	None
255	650 West 67th Place, Schererville, IN 46375-1390	A and B	None
256	29485 Highway 76 East, Clinton, SC 29325	A and B	None
257	685 Howard Street, Buffalo, NY 14206	A and B	None
258	17700 Foltz Parkway, Strongsville, OH 44149	A and B	None
259	15939 Industrial Parkway, Cleveland, OH 44135	A and B	None
260	2845 Center Road, Brunswick, OH 44212	A and B	None
261	11 Carrington Road, Castle Hill, NSW, Australia 2143	A and B	None
262	Units 3 4, 16 Abraham St., Balcatta, Perth, Western Australia 6021	A and B	None
263	Avenue Panamericana Norte 5369, Santiago, Chile (subtenant of Acrus-CCL)	A and B	None
264	Via Honduras 15, Pomezia, Italy 00040	A and B	None
265	5 6 The Switchback Gardner Road, Maidenhead, Berkshire, UK SL6 7RF	A and B	None
266	Unit 20 London Road, Warth Park Way, Raunds, Northamptonshire, UK NN9 6NY	A and B	None
267	Todos Los Santos 7651 Parque Industrial Pacifico, Tijuana, Mexico	A and B	None
268	Av Michoacan 20, Col. Renovacion, Unit 3 Parque Industrial FINSA, Iztapalapa DF 09209,	A and B	None



	Mexico		
269	89 Cross Street, Holliston, MA 01746	A and B	None
270	1 Better Way, Chicopee, MA 01022	A and B	None
271	175 Crossing Blvd., Suite 510, Framingham, MA 01702	A and B	None
272	4100 Highway 45 North, Meridian, MS 39301	A and B	None
273	50 Pointe Drive, Brea, CA 92821	A and B	None
274	6987 Calle de Linea, Suite 101, Olay Mesa, CA 92154	A and B	None
275	309 SW 18th Street □1 □3, Bentonville, AR 72712	A and B	None
281	Rond - Point d'Ecully, 1, chemin Jean-Marie Vainney, Ecully, France 69130	A and B	None
282	First Floor, La Croix Blanche, Thiers, France 63300	A and B	None
283	Miesbacher Strasse 5, Oberlaindern, Germany 83626	A and B	None
289	Houten, De Bouw 107 - Netherlands	A and B	None
290	ul. Orna 20 61-671 Poznań We will be vacating before the end of the year	A and B	None
291	Equator II, Al. Jerozolimskie 96, 00-807 Warszawa Suite nr 1553 -	A and B	None
292	Tegelv□gen 9, 232 54 □karp, SE	A and B	None
293	East Main Street Copeland Road, Clinton, SC	A and B	None



	29325		
295	Unit 4, 240 South Blair Street, Whitby Ontario L1N 0G3	A and B	None
296	2700 Freedland Road, Hermitage, PA	A and B	None
297	Unit 6 7 St. Johns Way, Foster Rd., Ashford Business Park,Sevington, Ashford, Kent, TN24 0SH	A and B	None
298	Dow Value Park,Gebäude E45, 06258 Schkopau, Germany	A and B	None
299	Costa Rica 5379, B1667JUJ - Pdo. de Malvinas Argentinas Buenos Aires Argentina	A and B	None
300	92 Ark Road, Lumberton, NJ 08048	A and B	None
301	4484 Mulhauser Road, Suite 200, Hamilton, OH	A	February 28, 2014
302	390 Albany Road, Moorestown, NJ 08057	A and B	None
303	1938 Olney Avenue, Cherry, Hil, NJ 08003	A and B	None
305	3250 West Big Beaver Road, Suite 325 , Troy, MI 48084	A and B	None
306	Industriestrasse 19 8962 Bergdietikon, Switzerland	A and B	None
307	Industriestrasse 23 25 8962 Bergdietikon, Switzerland	A and B	None
308	3 Forge Close, Little End Road, Eaton Socon, ST NEOTS, PE19 8TP. United Kingdom	A	November 4, 2014
309	Room 402-3, Building 5 Lane 338 Tianshan	A and B	None



	Road Changning District Shanghai City		
310	105 Gordon Baker Road, Suite 500 Willowdale, Ontario	A and B	None
311	327, Daehwa-ri, Seongnam-myeon, Dongnam-gu, Cheonan City, South Korea	A	December 19, 2014
312	16800 US 401 Bypass, Laurinburg, NC 28352	A and B	None
313	2220 Heinz Road, Iowa City, Iowa	A and B	None
314	Avenida das Industrias, 315 □ Area B □ Distrito Industrial □ CEP 13280-000 Vinhedo	A and B	None
315	Valdemarshaab 11, 1., - DK 4600 Koge	A and B	None
316	Karaağaç Mh. Yiğittürk Cd. No: 20/C Binyekmece, Istanbul	A	February 1, 2015
317	28214 Beck Road, Wixom, Michigan 48393	A and B	None
318	Calla Juan Jose Torres Landa 40, Comunidad de San Jeronimo No 51, San Jose Iturbide, Guanajuato, Mexico CP 37980 (N - 231.99 Metros con comernog, S.A. de C.V.; S -en 3 lineas, 42.007, 223.90 Y 227.29 metros con camino; E □ 191.148 Metros con lineas de commission federal de electricidad, Y; W □ 304.55 Metros con Hermanos Ramos Soto)	A and B	None
319	520 East Railroad Street, Clinton, North Carolina 28328	A and B	None
320	Moselweinstr, 34 □ 32, 54249 Tritteneheim, Germany	A and B	None
321	124 -150 Horizon Drive, Verona, Dane County, WI	A and B	None
323	Clinton, South Carolina - Laurens Co. Tax Map	A and B	None



	No.: 901-31-01-031, 901 E. Main St.		
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II. Solely with respect to the [covered locations] identified with a Retroactive Date, above, Section I., INSURING AGREEMENTS, Subsection A., NEW POLLUTION CONDITONS, of this Policy is hereby deleted in its entirety and replaced with the following:

A. NEW POLLUTION CONDITIONS (Coverage A.)

[Claims], [remediation costs], and associated [legal defence expense], in excess of the [self-insured retention], arising out of a [pollution condition] on, at, under, or migrating from a [covered location], provided the [claim] is first made, or the [insured] first discovers such [pollution condition] during the [policy period]. Any such discovery of a [pollution condition] must be reported to the Insurer, in writing during, the [policy period]. Any such [claim] must be reported to the Insurer, in writing, during the [policy period] or any applicable [extended reporting period].

It is a condition precedent to coverage afforded pursuant to this Coverage A. that all [pollution conditions] first commence, in their entirety:

1. During the [policy period] or,
2. If prior to the [policy period] then on or after the Retroactive Date identified in the Schedule of Covered Locations attached to this Policy, if any.

All other terms and conditions of this Policy remain unchanged.



NON-OWNED DISPOSAL SITES COVERAGE (Blanket - New Waste and Historical Waste) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 3
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

I. Section **V., DEFINITIONS**, Subsection **F.**, of this Policy is hereby deleted in its entirety and replaced with the following:

F. “**Covered location**” means:

1. Any location specifically identified in Item 9. of the Declarations to this Policy;
2. Any location that meets the prerequisites to coverage identified in Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any;
3. Any non-owned disposal site provided that any coverage afforded with respect to such non-owned disposal sites is limited to third-party claims pursuant to Subsection D., above; and
4. Any other location specifically scheduled as a covered location by endorsement attached to this Policy, if any.

II. Solely with respect to coverage for any non-owned disposal sites pursuant to this Endorsement, Section **V., DEFINITIONS**, Subsections **D.** and **Z.**, of this Policy are hereby deleted in their entirety and replaced with the following:

D. “**Claim**” means the written assertion of a legal right received by the insured from a third-party, including, but not limited to, a government action, suits or other actions alleging responsibility or liability on the part of the insured for bodily injury, property damage or remediation costs arising out of pollution conditions to which this insurance applies.

With respect to any coverage afforded with respect non-owned disposal sites covered “claims” are limited to those made by or on behalf of third-parties for pollution conditions allegedly attributable to a named insured or foreign subsidiary waste that is: 1) generated at a covered location other than a non-owned disposal site and 2) received at the non-owned disposal site prior to the expiration date identified in Item 2.a. of the Declarations to this Policy.

Z. “**Non-owned disposal site**” means:

1. Any disposal site or recycling facility located within Canada or the United States of America that has not at any time been owned or operated, in whole or in part, by any insured or foreign subsidiary which receives, or has historically received, a named insured or foreign subsidiary waste for disposal; provided that such disposal site or recycling facility:
 - a. Was properly permitted and licensed pursuant to environmental laws to accept the named insured or foreign subsidiary wastes at the time of such disposal by all Federal, provincial, state or other administrative or regulatory bodies or agencies with applicable jurisdiction;
 - b. Was not owned or operated by any person, corporation or unincorporated association that was in bankruptcy at the time the named insured or foreign subsidiary waste was received for disposal;
 - c. Has not, at any time prior to the inception date of this Policy, been identified on the United States EPA (CERCLA) National Priorities List, CERCLIS List or pursuant to any



functional equivalent of those listings made by Federal, provincial, state or other administrative or regulatory bodies or agencies with applicable jurisdiction pursuant to environmental laws; and

d. Was not undergoing voluntary or regulatory-required remediation activities at the time the named insured's or foreign subsidiary's waste was received for disposal; or

2. Any disposal site or recycling facility specifically identified on a Schedule of Disposal Sites Endorsement attached to this Policy, if any.

III. Section VI., **EXCLUSIONS**, Subsection P., **Non-Owned Disposal Sites**, of this Policy is hereby deleted in its entirety and replaced with the following:

P. Disposal Sites

Claims, remediation costs, foreign loss, ownership loss, foreign subsidiary loss, or legal defence expenses arising out of or related to pollution conditions on, at, under or migrating from disposal sites or recycling facilities that are not non-owned disposal sites.

All other terms and conditions of this Policy remain unchanged.



TRANSPORTATION COVERAGE ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 4
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

- I. Section I., **INSURING AGREEMENTS**, Subsection A., NEW POLLUTION CONDITIONS, of this Policy is hereby deleted in its entirety and replaced with the following:

A. NEW POLLUTION CONDITIONS (Coverage A.)

Claims, remediation costs, and associated legal defence expenses in excess of the self-insured retention, arising out of a pollution condition 1) on, at, under, or migrating from a covered location or 2) resulting from transportation, provided the claim is first made or the insured first discovers such pollution condition during the policy period. Any such discovery of a pollution condition must be reported to the Insurer in writing during the policy period. Any such claim must be reported to the Insurer, in writing, during the policy period or any applicable extended reporting period.

It is a condition precedent to coverage afforded pursuant to this Coverage A. that all pollution conditions first commence, in their entirety, during the policy period.

- II. Section V., **DEFINITIONS**, Subsection E., of this Policy is hereby deleted in its entirety and replaced with the following:

E. "Transportation" means the movement of the insured's waste or products by automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a covered location by an insured or foreign subsidiary, or by a person or entity, other than an insured or foreign subsidiary, engaged in the business of transporting property for hire, until such time as the waste or product is unloaded from an automobile, aircraft, watercraft, railcar or other conveyance.

- III. Section VI., **EXCLUSIONS**, Subsection R., **Vehicles**, of this Policy is hereby deleted in its entirety and replaced with the following:

R. Vehicles

Claims, remediation costs, foreign loss, ownership loss, foreign subsidiary loss and legal defence expenses arising out of or related to pollution conditions resulting from the use, maintenance or operation, including loading or unloading, of an automobile, aircraft, watercraft, railcar or other conveyance beyond the boundaries of a covered location.

This exclusion shall not apply to transportation.

All other terms and conditions of this Policy remain unchanged.



UNDERGROUND STORAGE TANK COVERAGE (Blanket) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 5
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐insured☐and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, Subsection **Q., Underground Storage Tanks**, of this Policy is hereby deleted in its entirety.

All other terms and conditions of this Policy remain unchanged.



BUSINESS INTERRUPTION AND DELAY EXPENSE ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 6
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

I. Section I., INSURING AGREEMENTS, of this Policy is amended by addition of the following:

SUPPLEMENTAL COVERAGE – BUSINESS INTERRUPTION

Actual business interruption loss incurred by an Insured during a period of interruption in excess of the Deductible Period.

It is a condition precedent to coverage afforded pursuant to this Supplemental Coverage that a business interruption loss

1. Be directly attributable to a covered pollution condition; and
2. Be reported to the Insurer, in writing, as soon as practicable, and during the policy period.

II. The amount the Insurer shall pay for business interruption loss pursuant to this Supplemental Coverage is limited by the following Sublimit of Liability and Deductible Period:

Sublimit of Liability: \$25,000,000

Deductible Period: 3 days

The Sublimit of Liability identified above shall be the maximum amount the Insurer shall pay for all business interruption loss arising out of all covered pollution conditions. This Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

The Insurer shall have no obligation to pay any business interruption loss incurred during the Deductible Period.

III. Section V., DEFINITIONS, of this Policy is amended by addition of the following:

“Business income” means:

1. Net profit or loss, before income taxes, including rental income from tenants, that would have been realized had there been no business interruption;
2. The Insured’s or foreign subsidiary’s continuing operating and payroll expense (excluding payroll expense of officers, executives, department managers and contract employees);
3. Costs incurred by the Insured or foreign subsidiary as rent for temporary premises when a portion of a covered location becomes untenable due to a covered pollution condition and temporary premises are required to continue the Insured’s or foreign subsidiary’s operations. Such rental costs cannot exceed the fair rental value of the untenable portion of the covered location.

“Business interruption” means necessary partial or complete suspension of the Insured’s or foreign subsidiary’s operations at a covered location arising from a covered pollution condition.



“Business interruption loss” means:

1. [Business income];
2. [Extra expense; and
3. [Delay expense].

“Covered pollution condition” means a [pollution condition] on, at or under a [covered location] for which coverage is otherwise afforded pursuant to this Policy pursuant to Coverages **A.** or **B.**, only, for [remediation costs] resulting from the first-party discovery of such [pollution condition]. The coverage afforded pursuant to this Endorsement shall not apply to any [business interruption loss] arising from or related to any [pollution conditions] for which coverage for [remediation costs] resulting from the first-party discovery of such [pollution conditions] is excluded pursuant to this Policy.

“Delay expense” means for a [covered location] under development, where a [covered pollution condition] causes a delay in the completion or development, any of the following expenses incurred shall be afforded coverage:

1. Additional interest on money the [insured] or [foreign subsidiary] has borrowed to finance the construction, development, or remediation of a project at a [covered location];
2. Additional realty taxes and other assessments;
3. Additional advertising or promotional expense;
4. Additional expenses incurred resulting from the renegotiation of leases, including associated usual and customary legal representation expense; and
5. Additional engineering, architectural, and consulting fees.

“Extra expense” means costs incurred by the [insured] due to a [covered pollution condition] that are necessary to avoid or mitigate any [business interruption]. Such costs must be incurred to actually minimize the amount of foregone [business income] that would otherwise be covered pursuant to this Endorsement.

“Period of interruption” means the length of time commencing with the date that operations are necessarily suspended at a [covered location] as a result of [covered pollution conditions].

“Rental income” means the actual rental fees lost as a result of a [suspension] of a rented [covered location].

“Suspension” means that part of or all of a rented [covered location] is rendered untenable for the purposes identified to the Insurer at the inception of the Policy, due to [covered pollution conditions].

IV. The following Conditions and Limitations shall apply to any coverage afforded pursuant to this Endorsement:

- A.** If such [business interruption] delays the start of the [insured's] or [foreign subsidiary's] operations, then the [period of interruption] shall begin on the date the operations would have begun if the [covered pollution condition] had not resulted in [business interruption].
- B.** The [period of interruption] shall end on the date that the subject [covered pollution condition] has been remedied to the point at which the [insured's] or [foreign subsidiary's] normal operations could reasonably be restored. Coverage shall not be afforded for any [covered pollution condition] resulting in loss of [business income] as a result of unfavorable business conditions caused by the impact of the [covered pollution condition].
- C.** If the Insurer and the [insured] disagree on the amount of [business income] or any other amount that is or may be covered pursuant to this Endorsement, either may make written demand for an appraisal of the loss. In this event, each party shall select a competent and impartial appraiser. If necessary, the two appraisers shall select an umpire. If they cannot agree, either may request that selection be made by a judge of a court having jurisdiction. The appraisers shall state separately the amount of [business income] or any other amount. If they fail to agree to a resolution, they shall submit their



differences to the umpire. A decision agreed to by the appraisers, of the umpire, if necessary, shall be binding upon both parties. Each party shall:

1. Pay its chosen appraiser; and
2. Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, the Insurer shall still retain all of its rights pursuant to the Policy to deny all or a portion of the claim.

V. Section VI., EXCLUSIONS, of this Policy is hereby amended by addition of the following:

This insurance also does not apply to ☐business interruption loss☐arising out of or related to any of the individually excluded exposures identified above.

All other terms and conditions of this Policy remain unchanged.



AUTOMATIC ACQUISITION AND DUE DILIGENCE (Fungi) ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 7
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

I. Section IX., **GENERAL CONDITIONS**, of this Policy is hereby amended by addition of the following:

Automatic Acquisition and Due Diligence

1. It is understood and agreed that, for an additional premium amount, any property acquired or leased by a named insured or foreign subsidiary during the policy period shall be added to the Policy as a covered location upon the closing date of such acquisition or the effective date of such lease, respectively; provided that the Insurer receives written notice of the property acquisition or lease within ninety (90) days of such closing or lease effective date, and the named insured or foreign subsidiary completes the following environmental due diligence assessment of the property prior to such acquisition or lease:
 - a. The named insured or foreign subsidiary commissions and receives:
 - 1) A Phase I Environmental Site Assessment report (or its functional equivalent with respect to any property acquired or leased in a jurisdiction outside of Canada) on the property that is performed by a qualified environmental consultant in accordance with CSA Z768-01 (as subsequently revised); and
 - 2) A Baseline Survey Process Report in accordance with the ASTM Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process in effect as of the inception of this Policy; or
 - b. The named insured or foreign subsidiary receives:
 - 1) A Phase I Environmental Site Assessment report (or its functional equivalent with respect to any property acquired or leased in a jurisdiction outside of Canada) on the property that has been conducted by a qualified environmental consultant for a third-party, provided that the assessment and related report are prepared in accordance with CSA Z768-01 (as subsequently revised); and
 - 2) A Baseline Survey Process Report on the property that has been conducted by a qualified environmental consultant for a third-party, provided that the assessment and related report are prepared in accordance with the ASTM Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process in effect as of the inception of this Policy,

and that the consultant responsible for the reports has provided the named insured or foreign subsidiary with written confirmation that the named insured or foreign subsidiary, as applicable, is entitled to rely on the conclusions of the reports as if the assessment had been performed on its behalf.
2. If the Phase I Environmental Site Assessment does not identify any Recognized Environmental Conditions, as defined by CSA Z768-01 (as subsequently revised) (hereinafter RECs), and the Baseline Survey Process Report does not identify fungi, legionella pneumophila or conditions conducive to the growth of fungi or legionella pneumophila (hereinafter Conducive Conditions) the property shall automatically be added to the Policy as



an additional [covered location] effective on the date the [named insured] or [foreign subsidiary] acquired the property or the effective date of the [named insured's] or [foreign subsidiary's] lease agreement.

3. If the Phase I Environmental Site Assessment identifies any RECs, then, before the property may be added to the Policy as a [covered location], the [named insured] or [foreign subsidiary] must complete a Phase II Environmental Site Assessment (or its functional equivalent with respect to any property acquired or leased outside of Canada) in accordance with CSA Z769-00 (as subsequently revised). Thereafter, the Insurer shall have thirty (30) days to review and approve the Phase II Environmental Assessment report. Said approval shall not be unreasonably withheld, but the Insurer reserves the right to limit coverage with respect to any RECs identified at the property, and any [pollution conditions] identified during further investigation of such RECs. Upon such approval, the Insurer shall provide a written endorsement to the [first named insured] confirming the effective date that the property has been added to the Policy as an additional [covered location], and describing the extent of the coverage being afforded with respect to the RECs and associated [pollution conditions] identified at the property.
4. If the Baseline Survey Process Report identifies [fungi], *legionella pneumophila* or Conductive Conditions, then, before coverage may be afforded for any [pollution conditions] involving the presence of [fungi], *legionella pneumophila* or other microbial-related conditions arising out of or related to Conductive Conditions, the [named insured] or [foreign subsidiary] must complete additional assessment or remediation activities to address such [fungi], *legionella pneumophila* or Conductive Conditions. Thereafter, the Insurer shall have thirty (30) days to review and approve the results of the additional assessment and or remediation activities. Said approval shall not be unreasonably withheld, but the Insurer reserves the right to limit coverage with respect to any [fungi], *legionella pneumophila* or Conductive Conditions identified at the property. Upon such approval, the Insurer shall provide a written endorsement to the [first named insured] confirming the effective date and extent of the coverage being afforded with respect to the [fungi], *legionella pneumophila* or Conductive Conditions identified at the property.
5. Additional premium for [covered locations] added to this Policy pursuant to Paragraphs 1. through 4., above, shall be calculated on a *pro rata* basis using the following rates:

Additional Premium Schedule

Acquired Property Type	Additional Premium
Industrial Sites	
Commercial	
Warehouses	
Offices	

In the event a property of a type not described in the Additional Premium Schedule, above, is acquired or leased by a [named insured] or [foreign subsidiary], the terms and conditions of this Subsection shall not apply.

All other terms and conditions of this Policy remain unchanged.



FUNGI AND LEGIONELLA COVERAGE (Sublimit) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 8
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

\$250,000 shall be the Aggregate Sublimit of Liability applicable to any coverage pursuant to this Policy for claims, remediation costs, and associated legal defence expense arising out of or related to fungi or *legionella pneumophila*. Therefore, this Aggregate Sublimit of Liability shall be the maximum amount the Insurer shall pay for all of the exposures specifically indicated below:

- ☒ emergency response costs *
- ☒ business interruption loss *
- ☒ diminution in value *
- ☒ rental income *
- ☒ catastrophe management costs *
- ☒ remediation costs
- ☒ claims

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

and associated legal defence expense, foreign loss, ownership loss or foreign subsidiary loss arising out of pollution conditions resulting from the presence of fungi or *legionella pneumophila* to which this Policy applies. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

All other terms and conditions of this Policy remain unchanged.



SCHEDULE OF NAMED INSUREDS (Broad – Majority Owned Chain) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 9
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

- I. The persons or entities within the scope of the description contained in the Schedule of Named Insureds, below, are named insureds pursuant to this Policy, but solely to the extent that such person or entity is domiciled or its principle place of business is located in Canada or another jurisdiction where the Insurer is either licensed or legally permitted to provide insurance without a license.
- II. In the event that any person or entity inadvertently identified within the scope of the description contained in the Schedule of Named Insureds, below, is domiciled or its principle place of business is located in a jurisdiction where the Insurer is not licensed and may not provide insurance without a license, such person or entity shall not be a named insured pursuant to this Policy. Instead, the Insurer agrees to indemnify the relevant named insured for its ownership interest in, or amounts that the relevant named insured represents and warrants that it has a contractual or other legal obligation to: 1) indemnify such person or entity for which they or it, respectively, have an underlying legal obligation to pay for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location; or 2) secure insurance coverage for such person or entity for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location, consistent with the indemnity coverage afforded to relevant named insureds with respect to foreign subsidiaries pursuant to Section I., **INSURING AGREEMENTS**, Subsection C., **FOREIGN POLLUTION CONDITIONS**, of this Policy.

Schedule of Named Insureds

1. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, other than joint ventures and general partnerships, as now or may hereafter exist during the policy period in which the first named insured, itself, or through a direct chain of underlying majority-owned operating subsidiary corporations, limited partnerships, limited liability partnerships, or limited liability companies, maintains at least a fifty percent (50 %) ownership interest (hereinafter Majority-Owned Affiliates); and
2. All joint ventures or general partnerships, as now or may hereafter exist during the policy period to which the first named insured, itself, or one of its Majority-Owned Affiliates, is a party and maintains at least a fifty percent (50 %) ownership interest, but only to the extent of the first named insured's or Majority-Owned Affiliates' legal responsibility for the liabilities of such joint venture or general partnership.

All other terms and conditions of this Policy remain unchanged.



NOTICE OF CANCELLATION (120 Days) ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 10
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **A., Cancellation**, Paragraph **2.**, of this Policy is hereby deleted in its entirety and replaced with the following:

2. This Policy may be cancelled by the Insurer for the following reasons:

a. Non-payment of premium; or

b. Fraud or material misrepresentation on the part of any insured or foreign subsidiary,

by mailing to the first named insured at the first named insured's last known address, written notice stating when, not less than one hundred and twenty (120) days thereafter, fifteen (15) days if cancellation is for non-payment of any unpaid portion of the premium, such cancellation shall be effective. The mailing of notice shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall be the end of the policy period.

Subparagraph **2.b.**, herein, shall apply only to that insured that engages in the fraud or misrepresentation. This exception shall not apply to any insured who is a parent corporation, subsidiary, employer of, or otherwise affiliated by ownership with, such insured, including the relevant named insured in the event that the implicated entity is a foreign subsidiary.

All other terms and conditions of this Policy remain unchanged.



OTHER INSURANCE (Primary – Except) ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 11
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐insuredand the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **H., Other Insurance**, of this Policy is hereby deleted in its entirety and replaced with the following:

H. Other Insurance

If other valid and collectible insurance is available to an ☐insuredor ☐foreign subsidiarycovering a loss also covered by this Policy, the insurance afforded by this Policy shall apply as primary insurance except for loss covered pursuant to **AS-9804045415**. Therefore, this Policy shall apply in excess of and shall not contribute with **AS-9804045415**.

All other terms and conditions of this Policy remain unchanged.



GLOBAL PPL INSURANCE PROGRAM (DIC/DIL) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 12
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

- I. Section II., **LIMITS OF LIABILITY AND SELF-INSURED RETENTION**, of the Policy is hereby amended by addition of the following:

Global Premises Pollution Liability Program Limits

- Notwithstanding any terms or conditions of this Policy which might be construed otherwise, the maximum aggregate limit of liability for: **1)** this Policy; **and 2)** any local admitted policy issued outside of Canada, to an Insured or foreign subsidiary as part of the first named insured's Global Premises Pollution Liability Insurance Program, **combined**, shall be the Total Program Policy Aggregate Limit of Liability identified in Item 5. of the Declarations of this Policy (hereinafter *Total Program Policy Aggregate*).
- The *Total Program Policy Aggregate* is the most that shall be paid pursuant to this Policy and any local admitted policy, **combined**, regardless of any aggregate, per occurrence, per claim, or per pollution condition, or any other limit of liability or limit of insurance, contained in any local admitted policy.
- Any claims, remediation costs, foreign loss, ownership loss, foreign subsidiary loss, legal defence expense, damages, loss or any other amounts or payments of any kind or category that are paid pursuant to any local admitted policy, shall reduce by that same amount the *Total Program Policy Aggregate*. All other limits of insurance or limits of liability pursuant to this Policy and any local admitted policy that include the term *aggregate* in their title or description are subject to and erode the *Total Program Policy Aggregate*.
- Nothing in this Subsection shall serve to increase the *Total Program Policy Aggregate*, or any applicable aggregate limit of liability or limit of insurance of any local admitted policy which shall be the maximum liability of any affiliate or non-affiliated partner company pursuant to such local admitted policy.
- Extra-Aggregate Payments Reimbursement Obligation*

The Insureds and Insurer agree that any affiliate or non-affiliated partner company of the Insurer issuing a local admitted policy shall have the right, at its sole discretion, to make payments in excess of the *Total Program Policy Aggregate*. In addition, the first named insured acknowledge that any affiliate or non-affiliated partner company of the Insurer may also be compelled to make such a payment pursuant to the terms of any local admitted policy. In either event, the first named insured agrees to reimburse the Insurer within thirty (30) days of the Insurer's request for reimbursement of any payment it makes pursuant to this Policy, or any payment that is made pursuant to any local admitted policy for claims, remediation costs, foreign loss, ownership loss, foreign subsidiary loss, damages, loss or any other amounts or payments of any kind or category, or any other amounts or payments of any type made by the Insurer or its affiliate or non-affiliated partner company issuing a local admitted policy after the Total Program Policy Aggregate has been exhausted.

- II. Section V., **DEFINITIONS**, of this Policy is hereby amended by addition of the following:



“**Local admitted policy**” means an insurance policy issued in a particular foreign jurisdiction by an insurance company that is licensed and or otherwise permitted to underwrite insurance in that country, and which policy is part of a Global Premises Pollution Liability Insurance Program for which this Policy provides coverage on a difference in conditions and or difference in limits basis exclusively to [named insureds], provided that such policy is identified on the Global PPL Insurance Program Schedule Endorsement attached to this Policy.

III. Section IX., GENERAL CONDITIONDS, Subsection H., Other Insurance, of this Policy is hereby deleted in its entirety and replaced with the following:

H. Other Insurance

Coverages A., and B.

If other valid and collectible insurance is available to an [insured] covering [claims], [remediation costs] or associated [legal defence expense] also covered by this Policy, other than a policy that is specifically written to apply in excess of this Policy, the insurance afforded by this Policy shall apply in excess of and shall not contribute with such other insurance.

Coverage C.

1. Primary Insurance

- a. This Policy is primary when: **1)** the terms and conditions of any other insurance, including any [local admitted policy], do not apply to cover [foreign loss], [ownership loss] or [foreign subsidiary loss] that is covered by this Policy; or **2)** when there is no remaining valid and collectible other insurance, including any [local admitted policy], for [foreign loss], [ownership loss] or [foreign subsidiary loss] that is covered by this Policy.
- b. If this Policy is determined to be primary, the Insurer's obligations are not affected unless any other applicable, unaffiliated insurance is also determined to be primary. In that event, the Insurer shall share with any insurer underwriting that other unaffiliated insurance by the method described in Paragraph 3., below.

2. Excess Insurance

This Policy is excess over any other valid and collectible insurance, including any [local admitted policy], which covers [foreign loss], [ownership loss] or [foreign subsidiary loss] that is also covered by this Policy.

When this Policy is excess over other insurance, including any [local admitted policy], the Insurer shall pay only its share of the amount of the [foreign loss], [ownership loss] or [foreign subsidiary loss], if any, that exceeds the sum of:

- a. The total amount that all such other insurance, including any local admitted policy, would pay for the [foreign loss], [ownership loss] or [foreign subsidiary loss] in the absence of this insurance; and
- b. The total of all deductible and or self-insured amounts pursuant to all such other insurance, including any [local admitted policy].

3. Method of Sharing

If all of the other unaffiliated insurance permits contribution by equal shares, the Insurer shall follow this method also. Pursuant to this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the [foreign loss], [ownership loss] or [foreign subsidiary loss] remains, whichever comes first.

If any of the other unaffiliated insurance does not permit contribution by equal shares, the Insurer shall contribute by limits. Pursuant to this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

Affiliate Financial Impairment



Notwithstanding anything in the foregoing that might be construed to the contrary, in the event a [local admitted policy] is not valid or collectible because of bankruptcy, insolvency, refusal or inability to pay of any affiliated insurer or network insurance partner pursuant to any [locally admitted policy], the Insurer will indemnify the relevant [named insured] pursuant to Coverage C. of this Policy on a primary basis, subject to the specific terms and conditions of this Policy. However, the Insurer does not assume any obligation pursuant to such [local admitted policy] and the relevant [foreign subsidiary] and or [named insured] shall assign the Insurer its rights to any available proceeds pursuant to such [local admitted policy].

All other terms and conditions of this Policy remain unchanged.



GLOBAL PPL INSURANCE PROGRAM SCHEDULE ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 13
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and Insurer agree that the following policies are each a local admitted policy within the purview of this Policy:

Insurer

- Illinois Union Insurance Company**

Policy Number

G24876871 004

All other terms and conditions of this Policy remain unchanged.



SCHEDULE OF FOREIGN SUBSIDIARIES ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 14
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insureds and the Insurer hereby agree that the entities identified below constitute foreign subsidiaries as that phrase is used within this Policy:

Schedule of Foreign Subsidiaries

1. CCL Label do Brasil S A (Vinhedo,Criciuma)
2. CCL Industries Corporation (Delaware)
3. CCL de Mexico, S.A. de C.V. (Mexico)
4. CCL Container, S.A. de C.V. (Mexico)
5. CCL Harrisonburg, Inc. (Virginia)
6. CCL Container (Hermitage), Inc. (Delaware)
7. CCL Container Corporation (Delaware)
8. CCL Tube, Inc. (Formerly CCL Plastic Packaging, Inc. (Delaware)
9. CCL Label, Inc.(Michigan)
10. CCL Tube (Wilkes-Barre), Inc.
11. CCL Label Portland, Inc. (Oregon)
12. CCL Label Sioux Falls, Inc. (South Dakota)
13. CCL Insertco, LLC (Maryland)
14. CCL Insertco de Puerto Rico, Inc. (Delaware)
15. Etiquetas CCL S.A. de C.V. (Mexico)
16. Inprint Extended text Labels, Inc. (Missouri)
17. CCL Label Services, S.A. de C.V. (Mexico)
18. CCL Label de Puerto Rico, Inc. (Puerto Rico)
19. CCL Label (St. Louis), Inc. (formerly Inprint Systems, Inc.
20. Moss printing, Inc. (Illinois)
21. CCL International Inc.
22. CCL Industries (U.K.) Limited
23. CCL Label GMBH (Hohenems) Austria
24. CCL Label Limited (U.K.)
25. CCL Label (Rhyl) Limited (Rhyl England)



26. Dolphin Limited (U.K.)
27. CCL Label (Avelin) S.A.S. (Lille, France)
28. CCL Label (France) S.A.S. (Bondy, France)
29. CCL Package Label S.N.C. (Chilly Mazarin, France)
30. CCL Inmould Label S.A.S. (Perigueux, France)
31. CCL Label AB (Sweden)
32. CCL Label OY (Finland)
33. CCL Label Sp z.o.o. (Poland)
34. Inprint Systems Limited (U.K.)
35. Haventrail Limited (U.K.)
36. CCL Investments Limited (U.K.)
37. CCL Label (Ashford Limited (U.K.)
38. Inprint Benelux Holding BV (Holland)
39. Enterprise Finishing Systems Ltd. (UK.)
40. Ditchling and Commercial Holdings Ltd. (UK.)
41. Inprint (Pharmaceutical) Ltd. (U.K.)
42. Ditchling Press Ltd. (Burgess Hill, U.K.)
43. CCL Label S.r.l. (Millan, Italy)
44. CCL Label (Oss) BV (Oss, Holland)
45. Inprint Benelux Vastgoed BV (Holland)
46. Witsiers Offset BV (Holland)
47. Witsiers Labels BV (Holland)
48. Witsiers Digital print Providers BV (Holland)
49. Syrinx ApS (Denmark)
50. Cyclone Holdings Hungary Ltd. (Hungary)
51. Syrinx Holding Germany GmbH (Germany)
52. Steinbeis Gewerbeground GmbH (Germany)
53. CCL Label GmbH (Holzkirchen, Germany)
54. CCL Label Meerane GmbH (Meerane, Germany)
55. CCL Design GmbH (Solingen, Germany)
56. FUNCINA GmbH (Germany)
57. CCL Label India Private Limited (India)
58. CCL Label Vietnam Company Limited (Vietnam)
59. CCL Label (Thai) Ltd. (Thailand)
60. CCL Label (Guangzhou) Co., Ltd. (China)
61. CCL Label (Hefei) Co., Ltd. (China)



- 62. Shi-Shi-Eru Japan Kabushiki Gaisha (Japan)
- 63. CCL Label SA (Pty) Ltd. (South Africa)
- 64. Syrinx Australia Pty. Ltd. (Australia)
- 65. Syrinx Cyprus Holdings Limited (Cyprus)
- 66. Clear Image Labels Pty. Ltd. (Australia)
- 67. OOO CCL-Kontur (Russia)

Notwithstanding the Insurer's agreement to specifically identify the entities, above, on this Schedule of Foreign Subsidiaries, the "insureds" and the Insurer agree that such entities are not "insureds" within the meaning of this Policy and that they have no independent legal rights to any payment or indemnification pursuant to any of the Coverages afforded pursuant to this Policy.

All other terms and conditions of this Policy remain unchanged.



PREMIUM EARN-OUT (Staggered – Multiple Years) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 15
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐ Insured ☐ and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **A., Cancellation**, Paragraph **3.**, of this Policy is hereby deleted in its entirety and replaced with the following:

3. In the event of cancellation, **Twenty-five** percent (**25**) of the premium identified in Item **6.** of the Declarations shall be minimum earned upon the inception date identified in Item **2.a.** of the Declarations. Thereafter, an additional **Thirty-three** percent (**33**) of the premium shall be deemed earned by the Insurer on a *pro rata* basis over the first year of the ☐ policy period ☐. Thereafter, the remaining unearned premium shall be deemed earned by the Insurer on a *pro rata* basis over **Two Years**. Any unearned premium amounts due the ☐ first named insured ☐ upon cancellation of this Policy during the ☐ policy period ☐ if any, shall be calculated on a *pro rata* basis and refunded within thirty (30) days of the effective date of such cancellation.

All other terms and conditions of this Policy remain unchanged.



FIRST-PARTY PROPERTY VALUE DIMINUTION COVERAGE ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 16
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

I. Section I., INSURING AGREEMENTS, of this Policy is hereby amended by addition of the following:

SUPPLEMENTAL COVERAGE

Actual diminution in value incurred by an insured in excess of the self-insured retention arising out of a covered pollution condition

It is a condition precedent to coverage afforded pursuant to this Supplemental Coverage that all diminution in value be reported to the Insurer, in writing, as soon as practicable, and during the policy period

II. The amount the Insurer shall pay for diminution in value pursuant to this Supplemental Coverage is limited by the following Aggregate Sublimit of Liability:

Aggregate Sublimit of Liability \$1,000,000

The Aggregate Sublimit of Liability identified above shall be the maximum amount the Insurer shall pay for all diminution in value arising out of all pollution conditions otherwise covered pursuant to this Policy. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

III. Section V., DEFINITIONS, of this Policy is hereby amended by addition of the following:

“Covered pollution condition” means a pollution condition on, at or under a covered location for which coverage is otherwise afforded pursuant to this Policy pursuant to Coverages A. or B, only, for remediation costs resulting from the first-party discovery of such pollution condition. The coverage afforded pursuant to this Endorsement shall not apply to any diminution in value arising out of or related to any pollution conditions for which coverage for remediation costs resulting from the first-party discovery of such pollution conditions is excluded pursuant to this Policy.

“Diminution in value” means the decrease in fair market value of a covered location as measured by either:

1. An amount developed in a final adjudication by a tax court of competent jurisdiction; or
2. By generally accepted property appraisal methods, including, but not limited to mortgage-equity analysis or sales comparison methods.

IV. If the Insurer and the insured disagree on the amount of diminution in value that is or may be covered pursuant to this endorsement, either may make written demand for an appraisal of such diminution in value. In that event, each party shall select a competent and impartial appraiser. If necessary, the two appraisers shall select an umpire. If the appraisers cannot agree, either may request that the umpire selection be made by a judge of a court having jurisdiction over the matter. The appraisers shall state separately the amount of diminution in value. If the appraisers fail to agree to a resolution, they shall submit their differences to the umpire. A decision agreed to by the appraisers, of the umpire, if necessary, shall be binding upon all parties to this Policy. Each party shall:

1. Pay its chosen appraiser; and



2. Bear the other expenses of the appraisal and umpire equally.

If there is an appraisal, the Insurer shall still retain all of its rights pursuant to this Policy to deny all or a portion of any ☐claim☐.

V. Section **VI., EXCLUSIONS**, of this Policy is hereby amended by addition of the following:

This insurance also does not apply to ☐diminution in value☐arising out of or related to any of the individually excluded exposures identified above.

All other terms and conditions of this Policy remain unchanged.



**JURISDICTION AND VENUE/CHOICE OF LAW Amendatory (Deletion) ENDORSEMENT
(PPL III/GPPL/PPL Port)**

Named Insured CCL Industries Inc.			Endorsement Number 17
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐ Insured ☐ and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsections **I., Jurisdiction and Venue**, and **J., Choice of Law**, are hereby deleted in their entirety.

All other terms and conditions of this Policy remain unchanged.



WAIVER OF SUBROGATION ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 18
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐insured☐and the Insurer hereby agree to the following changes to this Policy:

Section **IX., GENERAL CONDITIONS**, Subsection **E., Subrogation**, of this Policy is hereby deleted in its entirety and replaced with the following:

E. Subrogation

In the event of any payment pursuant to this Policy by the Insurer, the Insurer shall be subrogated to all of the rights of recovery against any person or organization, and the ☐insured☐shall, and shall cause all ☐foreign subsidiaries☐to, execute and deliver instruments and papers and do whatever else is necessary to secure such rights. All ☐insureds☐and ☐foreign subsidiaries☐shall do nothing to prejudice such rights. Any recovery as a result of subrogation proceedings arising pursuant to this Policy shall accrue first to the "insureds" to the extent of any payments in excess of the limit of coverage; then to the Insurer to the extent of its payment pursuant to the Policy; and then to the "insured" to the extent of the ☐self-insured retention☐. Expenses incurred in such subrogation proceedings shall be apportioned among the interested parties in the recovery in the proportion that each interested party's share in the recovery bears to the total recovery.

Notwithstanding the foregoing, the Insurer hereby waives its rights to subrogate against the entities identified below:

1. **Any entity or organization that the "Named Insured" has agreed, pursuant to a written contract, to waive its rights of subrogation, where such contract is executed prior to the relevant "claim" or "remediation costs" to which this insurance applies**

All other terms and conditions of this Policy remain unchanged.



SCHEDULE OF ADDITIONAL INSURED (Broad – With By Contract) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 19
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

- I. The persons or entities within the scope of the description contained in the Schedule of Additional Insureds, below, are additional insureds pursuant to this Policy, but solely: **1)** with respect to their vicarious liability arising out of any named insured's or foreign subsidiary's direct liability for a pollution condition on, at under or migrating from a covered location to which this insurance applies; and **2)** to the extent that such person or entity is domiciled or its principle place of business is located in Canada or another jurisdiction where the Insurer is either licensed or legally permitted to provide insurance without a license.
- II. In the event that any person or entity inadvertently identified within the scope of the description contained in the Schedule of Additional Insureds, below, is domiciled or its principle place of business is located in a jurisdiction where the Insurer is not licensed and may not provide insurance without a license, such person or entity shall not be an additional insured pursuant to this Policy. Instead, the Insurer agrees to indemnify the relevant named insured for its ownership interest in, or amounts that the relevant named insured represents that it has a contractual or other legal obligation to: **1)** indemnify such person or entity for which they or it, respectively, have an underlying legal obligation to pay for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location; or **2)** secure insurance coverage for such person or entity for bodily injury, property damage or remediation costs, including any associated legal defence expense, arising out of a pollution condition on, at, under or migrating from a covered location, consistent with the indemnity coverage afforded to relevant named insureds with respect to foreign subsidiaries pursuant to Section I., **INSURING AGREEMENTS**, Subsection C., **FOREIGN POLLUTION CONDITIONS**, of this Policy.

Schedule of Additional Insureds

1. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, other than joint ventures and general partnerships, as now or may hereinafter exist during the policy period, in which a named insured maintains an ownership interest;
2. All joint ventures or general partnerships, as now or may hereinafter exist during the policy period to which a named insured is a party, as now or may hereinafter exist during the policy period but only to the extent of the named insured's legal responsibility for the vicarious liability of such joint venture or general partnership; and
3. All corporations, limited partnerships, limited liability partnerships, limited liability companies or other business entities or associations, as now or may hereinafter exist during the policy period but solely to the extent that: **a)** a named insured or foreign subsidiary is required by contractual agreement with such entity to provide such coverage; and **b)** the named insured's contractual agreement with such entity was executed and effective prior to any related claim, foreign claim or underlying matter substantiating a foreign subsidiary claim.



All other terms and conditions of this Policy remain unchanged.



ADDITIONAL INSURED SCHEDULE (Mortgagee) II ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 20
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

- I. The entity identified below shall be considered an additional insured pursuant to this Policy, but only with respect to its vicarious liability arising out of pollution conditions on, at under or migrating from a covered location resulting from its Mortgagee interest in that covered location

Mortgagee

- Any Canadian lender having financial interest in a covered location.

- II. Section IX., **GENERAL CONDITIONS**, Subsection L., **Changes and Assignment**, is hereby amended by addition of the following:

Notwithstanding the foregoing, assignment of this Policy to the Mortgagee identified in Paragraph I. of the Additional Insured (Mortgagee) Endorsement attached to this Policy shall automatically occur in the event of default upon the covered locations by the Mortgagee Insured. In the event of default the Mortgagee Insured must notify the Insurer of such event of default in writing, within fourteen (14) days of the date of the event of default. Upon receipt of such notice by the Insurer, the Insurer shall issue an endorsement assigning the Policy to the Mortgagee, such endorsement shall be effective as of the date of the event of default.

- III. In the event of assignment, as detailed in Paragraph II., above, all of the terms and conditions of this Policy shall apply to the Mortgagee as if such Mortgagee were the first named insured pursuant to this Policy.

- IV. Section V., **DEFINITIONS**, of this Policy is hereby amended by addition of the following:

“Event of default” means the legal event that triggers the Mortgagee's ability to exercise its legal right of foreclosure against the covered location.

- V. Section IX., **GENERAL CONDITIONS**, of this Policy, is hereby amended by addition of the following:

Lender Liability

The existence of any legal protection for the insured against liability of any kind whatsoever in connection with pollution conditions including, but not limited to, the secured creditor exemption in Section 9601(20) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Sec. 9601 et seq., shall in no way affect the rights of the insured pursuant to this Policy. Any failure of an insured to qualify for such protection shall not, in and of itself, trigger Section VI., **EXCLUSIONS**, Subsection K., **Intentional Non-Compliance**, of this Policy or in any other way affect the rights of an insured pursuant to this Policy.

- VI. Foreign Mortgagees

In the event that any person or entity inadvertently identified as a Mortgagee in Section I. of this Endorsement, above, is domiciled or its principle place of business is located in a jurisdiction outside of Canada, such person or entity shall not be either an additional insured or named insured pursuant to this Policy. Instead, the Insurer agrees to indemnify the relevant named insured for amounts that the relevant named insured represents that it has a contractual or other legal obligation to: 1) indemnify such person or entity for which they or it, respectively,



have an underlying legal obligation to pay for [bodily injury], [property damage] or [remediation costs], including any associated [legal defence expense], arising out of a [pollution condition] on, at, under or migrating from a [covered location], or 2) secure insurance coverage for such person or entity for [bodily injury], [property damage] or [remediation costs], including any associated [legal defence expense], arising out of a [pollution condition] on, at, under or migrating from a [covered location], consistent with the indemnity coverage afforded to relevant [named insureds] with respect to [foreign subsidiaries] pursuant to Section I., **INSURING AGREEMENTS**, Subsection C., FOREIGN POLLUTION CONDITIONS, of this Policy.

All other terms and conditions of this Policy remain unchanged.



BASIC EXTENDED REPORTING PERIOD (90 Days) ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 21
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

Section **VIII.**, **EXTENDED REPORTING PERIOD**, Subsections **C.** and **D.**, of this Policy are hereby deleted in their entirety and replaced with the following:

- C.** Provided the first named insured has not purchased any other insurance to replace this Policy, the first named insured shall have a ninety (90) day basic extended reporting period without additional charge.
- D.** Provided the first named insured has not purchased any other insurance to replace this Policy, the first named insured shall also be entitled to purchase a supplemental extended reporting period of up to thirty-three (33) months for not more than two hundred percent (200 %) of the full premium identified in Item **6.** of the Declarations to this Policy, and any additional premiums resulting from coverage added during the policy period. Such supplemental extended reporting period starts when the basic extended reporting period ends. The Insurer shall issue an endorsement providing a supplemental extended reporting period provided that the first named insured:
 - 1.** Makes a written request, to the address identified in Item **8.b.** of the Declarations to this Policy, for such endorsement which the Insurer receives prior to the expiration of the policy period; and
 - 2.** Pays the additional premium when due. If that additional premium is paid when due, the supplemental extended reporting period may not be cancelled, provided that all other terms and conditions of the Policy are met.

All other terms and conditions of this Policy remain unchanged.



COVERED LOCATION AMENDATORY ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 22
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insureds and the Insurer hereby agree to the following changes to this Policy:

- I. Section **V. Definitions**, subsection **F. Covered location** is deleted in its entirety and replaced with the following:

“Covered Location” means:
 1. Any location that meets the prerequisites to coverage identified in Automatic Acquisition and Due Diligence Endorsement attached to this Policy, if any.
 2. Any location that was inadvertently omitted from the Statement of Values titled EIL Schedule of Locations and dated 02 23 2015 and was owned, operated, managed or leased by the first named insured or any named insured upon the inception date identified in Item 2. of the Declarations to this Policy; and
 3. Any other location specifically scheduled as a covered location by endorsement attached to this Policy, if any.

- II. Solely with respect to covered locations identified in Item 1. 2. above, no coverage shall be afforded for pollution conditions that commenced, in whole or in part, prior to the inception date identified in Item 2. of the Declarations to this Policy.

- III. The covered locations identified in the Schedule of Covered Locations, below, shall be subject to an Aggregate Sublimit of Liability of **\$1,000,000**. Therefore, the most Insurer shall pay for all:
 - ☒ business interruption loss *
 - ☒ diminution in value *
 - ☒ rental income *
 - ☒ catastrophe management costs *
 - ☒ emergency response costs
 - ☒ remediation costs
 - ☒ property damage
 - ☒ bodily injury

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

and any associated legal defense expense arising out of pollution conditions on, at, under or migrating from the covered locations identified below, shall be **\$1,000,000**. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.



Schedule of Covered Locations

1. Any location that was inadvertently omitted from the Statement of Values titled EIL Scheudle of Locations and dated 02 23 2015 and was owned, operated, managed or leased by the "first named insured" or any "named insured" upon the inception date identified in Item 2. of the Declarations to this Policy.

All other terms and conditions of this Policy remain unchanged.



**POLLUTION CONDITION AMENDATORY (Inclusion of Electromagnetic Fields)
ENDORSEMENT (PPL Port)**

Named Insured CCL Industries Inc.			Endorsement Number 23
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

Section **V.**, **DEFINITIONS**, Subsection **W.**, of this Policy is hereby deleted in its entirety and replaced with the following:

W. "Pollution condition" means:

1. The presence of fungi or *legionella pneumophila*;
2. Illicit abandonment; or
3. the discharge, dispersal, release, escape, migration or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including smoke, soot, vapors, fumes, acids, alkalis, chemicals, hazardous substances, hazardous materials, electromagnetic fields, or waste materials, on, in, into, or upon land and structures thereupon, the atmosphere, surface water, or groundwater.

For the purpose of this definition, waste materials includes, but is not limited to low-level radioactive waste, mixed waste and medical, infectious and pathological waste.

All other terms and conditions of this Policy remain unchanged.



RESPONSIBLE PERSON AMENDATORY ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 24
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

Section **V., DEFINITIONS**, Subsection **CC.**, of this Policy is hereby deleted in its entirety and replaced with the following following:

CC. "Responsible person" means any facility manager responsible for environmental affairs, control, or compliance at any individual covered location, the Vice President of Risk and Environmental Management of the first named insured, and any officer or director of, or partner in, a named insured or foreign subsidiary.

All other terms and conditions of this Policy remain unchanged.



SIR PAYMENT RECOGNITION ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 25
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insureds and the Insurer hereby agree to the following changes to this Policy:

- I. Section II., **LIMITS OF LIABILITY AND SELF-INSURED RETENTION**, Subsection A., of this Policy is hereby deleted in its entirety and replaced with the following:
- A. It is expressly agreed that the Insurer's obligation to pay for any covered claims, remediation costs, foreign subsidiary loss or legal defence expense shall attach to the Insurer only after the first named insured shall have paid, or, in the event of a foreign subsidiary claim under Coverage C., have provided evidence to the Insurer that a named insured, foreign subsidiary, or other entity specifically identified on the SIR Payment Recognition Endorsement, has paid, the full amount of the self-insured retention. Under no circumstances shall the Insurer be liable to pay any amount within the self-insured retention. In the event that the first named insured cannot provide satisfactory evidence that a named insured, foreign subsidiary, or other entity specifically identified on the SIR Payment Recognition Endorsement, has paid the full amount of the self-insured retention with respect to any "pollution condition" resulting in a foreign subsidiary claim under Coverage C. of this Policy, the first named insured shall remain responsible to pay the self-insured retention before the Insurer's payment obligation under this Policy shall attach.

The insureds and the Insurer agree that payments made by **Waterman Insurance Inc.** under **Quota Share Reinsurance Agreement, April 09, 2009**, for any claims, remediation costs, legal defense expense, or foreign subsidiary loss arising out of a pollution condition that is also covered under this Policy, will be credited against the self-insured retention that is applicable to said pollution condition.

All other terms and conditions of this Policy remain unchanged.



**PROPERTY DAMAGE AMENDATORY (Stigma)
ENDORSEMENT**

Named Insured CCL Industries Inc.			Endorsement Number 26
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

Section **V., DEFINITIONS**, Subsection **EE.**, of this Policy is hereby deleted in its entirety and replaced with the following following:

EE. "Property damage" means:

1. Physical injury to, or destruction of, tangible property of a third-party, including all resulting loss of use of that property;
2. Loss of use of tangible property of a third-party, that is not physically injured or destroyed;
3. Diminished value of tangible property of a third-party, including any diminution due to alleged stigma associated with a covered pollution condition and,
4. Natural resource damages
5. With respect to pollution conditions located within the European Union, biodiversity damage

All other terms and conditions of this Policy remain unchanged.



**COVERAGE TERRITORY AMENDATORY (Deletion of People's Republic of China)
ENDORSEMENT (GPPL)**

Named Insured CCL Industries Inc.			Endorsement Number 27
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

Section **IV., COVERAGE TERRITORY**, of this Policy is deleted in its entirety and replaced with the following:

IV. COVERAGE TERRITORY

The coverage afforded pursuant to this Policy shall apply to pollution conditions worldwide, except for any pollution conditions within any of the former member states of the Union of Soviet Socialist Republics, including Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Notwithstanding the foregoing, this Policy shall not afford coverage for any risk which would otherwise be in violation of the laws of Canada, including, but not limited to, economic or trade sanction laws or export control laws administered by the government of Canada.

All other terms and conditions of this Policy remain unchanged.



**ASBESTOS, LEAD-BASED PAINT AND PUNITIVE DAMAGES (Sublimit- Reinsurance)
ENDORSEMENT (PPL III)**

Named Insured CCL Industries Inc.			Endorsement Number 28
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Insured and the Insurer hereby agree to the following changes to this Policy:

- I. **\$25,000,000** shall be the Aggregate Sublimit of Liability for coverage afforded pursuant to this Policy, if any, for asbestos, asbestos-containing materials, lead-based paint and punitive damages. Therefore, this Aggregate Sublimit of Liability shall be the maximum amount the Insurer shall pay for all of the exposures specifically indicated below:

- ☒ emergency response costs *
- ☒ business interruption loss *
- ☒ diminution in value *
- ☒ rental income *
- ☒ catastrophe management costs *
- ☒ remediation costs
- ☒ claims

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

and associated legal defense expenses arising out of or related to asbestos, asbestos-containing materials, lead-based paint or punitive damages to which this insurance applies. This Aggregate Sublimit of Liability shall be subject to the Limits of Liability identified in the Declarations to this Policy. Under no circumstance shall the Insurer be liable to pay any amount in excess of any applicable Limit of Liability.

- II. Nothing in this Endorsement shall be construed to expand coverage beyond the explicit terms and conditions in this Policy.

All other terms and conditions of this Policy remain unchanged.



PRIOR CLAIMS EXCLUSIONARY (Itemized) ENDORSEMENT (GPPL/PPL Port)

Named Insured CCL Industries Inc.			Endorsement Number 29
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

Section **VI., EXCLUSIONS**, of this Policy is hereby amended by addition of the following:

This Insurance also does not apply to:

Prior Claims

The claims, foreign claims, or underlying matters that might otherwise substantiate a foreign subsidiary claim (hereinafter Underlying Claims) (collectively hereinafter Identified Claims) specifically identified below, along with any current or subsequent claims, foreign claims or Underlying Claims made in conjunction with such Identified Claims (e.g., counterclaims, cross-claims or third-party claims made as part of the Identified Claims, any associated appeals of the Identified Claims, any claims, foreign claims or Underlying Claims ultimately consolidated with the Identified Claims, or any claims, foreign claims or Underlying Claims involving different plaintiffs but the same collection of operative facts and or allegations contained in the Identified Claims), and any associated legal defence expense.

- **Prior claims associated with Superfund Site in Clavet City, Kentucky**

All other terms and conditions of this Policy remain unchanged.



INSURED vs. INSURED AMENDATORY ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 30
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The ☐ Insured ☐ and the Insurer hereby agree to the following changes to this Policy:

- I. Section VI., **EXCLUSIONS**, Subsection I., **Insured vs. Insured**, of this Policy is deleted in its entirety.

All other terms and conditions of this Policy remain unchanged.



SCHEDULE OF DISCLOSED DOCUMENTS ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 31
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree that the pollution condition(s) identified within the documents listed in the Schedule of Disclosed Documents below have been disclosed to the Insurer prior to the inception of this policy, and shall be deemed discovered during the policy period.

SCHEDULE OF DISCLOSED DOCUMENTS

<i>Site Address</i>	<i>CCL ID</i>	<i>Reports</i>
810 North Main St., Harrisonburg, VA	82	Work Plan, Limited Phase II, RFI, Focus Area of Concern, Groundwater Environmental Quality Management, Inc., Dec. 4, 2008 CAP RCRA Site Visit Report, Interpac (Harrisonburg) Inc. USEPA Region III, Dec. 13, 2006 Environmental Pollution and Liability Assessment AMEC, Sept. 30, 2002
2300 4th Townsend, Chester, PA	44	Underground Storage Tank Closure Summary Harding Lawson Associates, Aug. 16, 1994
2700 Freedland Road, Hermitage, Pennsylvania		Phase I Environmental Site Assessment (ESA), RTI International Metals, 2700 Freedland Road, City of Hermitage, Mercer County, Hermitage, Pennsylvania, conducted by Compliance Management International (CMI), dated July 2013
5 Equinas de Tibas San Jose, Costa Rica	140	Environmental and Pollution Liability Assessment AMEC, Nov. 15, 2002
9th Hawkings St. Carrollton, KY	47	Remedial Excavation Shield Environmental Associates Ltd., Jan. 15, 2004
163 Robert St. E. Penetanguishene, ON	40	Agreed Statement of Facts, R. v. CCL Industries Inc. Equipment Pit Removal and Confirmatory Soil Sampling Program Pinchin Environmental, Jul. 10, 2008 Phase I ESA and Environmental Compliance Review AMEC, May 27, 2005



		Phase I ESA, CRA, November 2011
390 New Albany Road, Moorestown Township, Burlington County, New Jersey		Phase I ESA, 390 New Albany Road, Moorestown Township, Burlington County, New Jersey, conducted by PEM, dated December 2013
20 Ashton Ave. Swedesboro, NJ		Preliminary Assessment Report AccuTech Environmental Services Inc., June 24, 2003 Semi-Annual (October 2002 through March 2003) RA Progress Report Environmental Compliance Inc., May 27, 2003 Environmental and Pollution Liability Assessment AMEC, Sept. 30, 2002 Remediation in Progress Waiver, Waiver Application dated July 3, 2003 NJDEP, July 25, 2003
2617 Commerce Circle Irondale, AL	244	Review of ARBCA RM-2 Evaluation ADEM, January 9, 2009 Groundwater Monitoring Report, August 2006 Cardinal Resources, November 2006 RM-2 Evaluation Cardinal Resources, August 2007
1209 West Bailey St. Sioux Falls, SD	107	Leaking Containment System DENR, July 3, 2008 Addendum to Contract for Additional Spill Release Assessment Geotek Engineer Testing Services Inc., July 18, 2008 E-mail - Soil Groundwater Lab Report 8 6 Elizabeth Mierzynski, Aug. 7, 2008 E-mail - Solvent Release Corrective Action Susan Snelgrove, Jan. 15, 2009 Closure of DENR File Number 2008.121 DENR, Sept. 26, 2008 Phase I ESA and Environmental Compliance Audit AMEC, July 1, 2004 Phase I ESA, CRA, December 2010 Phase I ESA - Amec - September 2014
Foster Road Ashford Business Park Ashford, Kent, UK	191	Phase I Environmental Site Assessment AMEC, Sept. 12, 2005 Environmental Site Assessment Program - Operating Facility Profile CCL Industries, Jan. 13, 2009 Environmental Sampling CRA, Feb. 15, 2008 Phase I ESA, CRA, December 2010



		Phase I ESA - Amec - February 2014
285 Union Avenue Memphis, TN	106	Phase I Environmental Site Assessment Environmental Compliance Review AMEC, Sept. 13, 2005 Asbestos Removal and Disposal at 285 Union Memphis Wrecking Company, July 7, 2008
Parcelle ZL66 ZA La Barogne Moussy-Le-Neuf, France	206	Diagnostic Initial de la Qualit des Sols Excipe France, Dec. 19, 2006 Phase I ESA, CRA, July 2011
35 McLachlan Drive Etobicoke, ON	36	Phase I Environmental Site Assessment CRA, Nov. 2007 Supplemental Phase II Environmental Assessment Mantech Environmental Corporation, April 25, 1997 Phase I ESA - CRA - November 2012
11328 Sunrise Gold Cir. Rancho Cordoba, CA	102	Phase II Subsurface Soil Investigation Fred C. Hart Associates, Aug. 25, 1989
3642 Muddy Creek Rd. Cincinnati, OH	81	Environmental Site Assessment Report Weiss Associates, Oct. 17, 1995 Subsurface Environmental Investigation of CCL Label Inc. ManTech Environmental Corporation, Oct. 29, 1996
1616 S. California Ave. Monrovia, CA	96	Environmental Site Assessment Report Weiss Associates, Oct. 26, 1995 Report on Subsurface Conditions CCL Label Inc., Apr. 29, 2003
26 Watermain Ave. East York, ON	14	Site Specific Risk Assessment, Final Document Barenco, August 2001 Chronology of Environmental Site Restoration Program at 26 Waterman Site CCL Industries, Feb. 2003 Brownfield Environmental Site Registry
81 Hymus Blvd. Pointe Claire, QC	20	Environmental Soil Characterisation Gartner Lee Limited, Aug. 10, 2000 Environmental Soil Characterisation Study CCL Industries, June 18, 2001
430 Steelcase Rd. E. Markham, ON	7	Site Remediation Dillon, June 1991
Arkwright Road Runcorn, UK	119-122	Baseline Ground Quality Investigation ERM, June 1999 Investigation of Ground Quality in the Vicinity of a Wastewater Interceptor ERM, July 1999 Interceptor Tank Removal Report CCL Industries, February 2002
78 Titan Road Etobicoke, ON	29	Report of a Phase II Environmental Site Assessment Construction Control Inc., December 2001
50000 W. Pontiac Tr. Wixom, MI	111	Diesel Fuel Discharge to Surface Water MDEQ, Aug. 7, 1996 Environmental Assessment, ENSR, June 1990 Interoffice Memorandum to Paul Murdoch



		Consulting Services Inc., Jan. 20, 1995
6100 W. Howard St. Niles, IL	110	Niles CCL Custom Manufacturing, Site Remediation Technical Reports Illinois EPA, Aug. 24, 1998 Interoffice Memorandum to Paul Murdoch Consulting Services Inc., February 22, 1995
1862 Suncast Lane, Batavia, IL	241	Phase I ESA, CRA, March 2011
Pond Lane, Parkfields Wolverhampton, UK	129	Environmental, Health and Safety Liability Audit ERM, Sept. 1994
Jarvis Porter Peha 3993 Houten, NL	149	Phase I Environmental Site Assessment AMEC, Dec. 12, 2001
4 5 rue Descartes Vineuil, FR	225	Environmental Site Assessment Program, Operating Facility Profile CCL Industries, Jan. 16, 2009
4 Plant Street Plattsburgh, NY	91	Environmental and Pollution Liability Assessment AMEC, Oct. 31, 2002
1725 South Third St. Memphis, TN	99	Phase I Environmental Site Assessment AMEC, Apr. 15, 2002
Estate Road No. 6 South Humberside Industrial Estate Grimsby, UK	116	Phase I Environmental Site Assessment AMEC,
Akinsons Way Foxhill Industrial Park Scunthorpe, UK	123-124	Phase I Environmental Site Assessment AMEC,
8800 South Boulevard Charlotte, NC	100	Phase I Environmental Site Assessment Agra, March 26, 1998
8 Marlen Drive Robbinsville, NJ	75	Phase I Environmental Site Assessment Golder, September 2006
104 North Gold Drive Robbinsville, NJ	186	Phase I ESA, CRA, November 2010 Phase I ESA - Amec - July 2014
1200 West Bailey St. Sioux Falls, SD	108	Phase I ESA and Environmental Compliance Audit AMEC, July 2, 2004 Phase I ESA - Amec - September 2014 Phase I ESA, CRA, November 2010
1831 Portal Street Baltimore, MD	156	Phase I ESA and Environmental Compliance Audit AMEC, Feb. 24, 2003



		Phase I ESA, CRA, December 2010
1187 1191 Industrial Rd. Cold Spring, KY	67 68	Phase I Environmental Site Assessment CRA, August 2007 Phase I ESA - CRA - November 2012
15 Controls Drive Shelton, CT	56	Phase I Environmental Site Assessment CRA, January 2007 Phase I ESA, CRA, July 2011
124-126 Pt. West Blvd. St. Charles, MO	189	Phase I ESA and Environmental Compliance Audit AMEC, Oct. 11, 2005
208 Spring Drive St. Charles, MO	188	Phase I ESA and Environmental Compliance Audit AMEC, Oct. 11, 2005 Phase I ESA, CRA, July 2011
2003 Case Parkway Twinsburg, OH	20100	Memorandum - Environmental Site Assessment CCL, July 23, 2007 Draft - Phase I Environmental Site Assessment CRA, December 2006
576 College Comm. Upland, CA	153	Phase I Environmental Site Assessment CRA, January 2008 Phase I ESA - Amec - June 24, 2014
24181 8th Street East, Sonoma, CA	NEW	Phase I ESA - CRA June 2012
4000 Westinghouse Charlotte, NC	114	Phase I Environmental Site Assessment CRA, January 2007 Phase I ESA - CRA - November 2012
Toldbodgade 96, Randers, Denmark	168	Environmental, Health and Safety Disclosure Report COWI, December 2002 Phase I ESA, CRA, August 2011
Tjaebyvej 90 Randers, Denmark	167	Environmental, Health and Safety Disclosure Report



		COWI, December 2002
2001 North Hunt St. Terre Haute, IN	93	Phase I Site Assessment Geraghty Miller, Sept. 15, 1994
Ditchling Press Burgess Hill West Sussex, UK	190	Phase I Environmental Site Assessment AMEC, Sept. 12, 2005
Unit 3 Pioneer Bus. Park Wakefield West Yorkshire, UK	202	Phase I Environmental Site Assessment CRA, December 2006 Phase I ESA - Amec - February 2014 Phase I ESA, CRA, December 2010
Unit 6 Pioneer Bus. Park Wakefield West Yorkshire, UK	177	Professional Opinion on Environmental Risk Wilburn Associates, Dec. 19, 2006 Phase I ESA - Amec - March 2014 Phase I ESA, CRA, December 2010
15 Cliffe Ind. Estate Lewes, UK	146	Phase I Environmental Site Assessment AMEC, Jan. 15, 2002
Ingram Row Leeds, UK	147	Phase I Environmental Site Assessment AMEC, Jan. 15, 2002 Contamination and Geotechnical Assessment of Proposed Development JPG, August 2003
Unit B, Cefndy Rd. Employment Park North Wales, UK	159	Environmental Due Diligence Audit Report DP Franks, Feb. 12, 2002
Nyager 11-13 Brondby, Denmark	161	Environmental, Health and Safety Disclosure Report COWI, December 2002 Phase I ESA, CRA, August 2011
Nyager 15-17 Brondby, Denmark	162	Environmental, Health and Safety Disclosure Report COWI, December 2002
Nyager 4 Brondby, Denmark	163	Environmental, Health and Safety Disclosure Report COWI, December 2002
Midtager 2 Brondby, Denmark	164	Environmental, Health and Safety Disclosure Report COWI, December 2002
Midtage 21 Brondby, Denmark	165	Environmental, Health and Safety Disclosure Report COWI, December 2002
Kierska-Kiekrz 60-480 Rokietnica Poland	178	CD with a bunch of documents mostly in Polish, and e-mail to Susan Snelgrove from Tony Arif, dated March 25, 2005 Phase I ESA, Amec, December 2011
Via Del Commercio, 2 Concorezzo (MI), Italy	193	Phase I Environmental Site Assessment AMEC, Sept. 12, 2005
Hongqi Road	179	Environmental Research of CCL Label, Inc.



Guangdong Province Guangzhou, China		GDZCDC Engineering Consultants Ltd., Dec. 13, 2004
Gengyun Rd., Hefei Anhui Prov., China	184	Environmental Site Assessment Program - Operating Facility Profile CCL Industries, May 26, 2005
Carmelray Industrial Park 2, Km 54 National Highway, Calamba City, Laguna, Philippines		Operating Facility Profile, December 19, 2012
69 Moo 5, Wellgrow Industrial Estate Thailand	155	Phase I Environmental Site Assessment AMEC, Oct. 2003 Phase I ESA, CH2M HILL, July 27, 2011
No. 8 VSPH, St. No. 6 Bing Duong Ind. Serv. Vietnam	215	Environmental Site Assessment Program - Operating Facility Profile CCL Industries, no date
19 Railway Terrace Nuriootpa, Australia	221	Phase I Environmental Site Assessment URS, March 14, 2008
102 Tynte St. Adelaide, Australia	222	Environmental Site Assessment Program - Operating Facility Profile CCL Industries, Feb. 18, 2008
1A Bessemer Street, Unit 4, Blacktown, New South Wales 2148, Australia	NEW	Phase I ESA and Limited Compliance Review, ERM, April 30, 2012
809-821 Botany Road Rosebery, Australia	223	Environmental Site Assessment Program - Operating Facility Profile CCL Industries, Feb. 18, 2008
R. Antonio Dare St. Criciuma Santa Catarina, Brazil	203	Phase I Environmental Site Assessment CRA, December 2006
R. Comendador J.L. Vinhedo, Brazil	194	Technical Assessment Campinas Environmental Agency, Oct. 30, 2006 Phase I ESA, CRA, March 2011
San Jeronimo San Jose de Iturbide Guanajuato, Mexico	207	Phase I Environmental Site Assessment CRA, May 2007
Neversink Ave. Port Jervis, NY	85	Modified Environmental Risk Assessment Consulting Services Inc., Oct. 5, 1995
Skyline Drive Port Jervis, NY	98	Modified Environmental Risk Assessment Consulting Services Inc., Oct. 5, 1995 Phase I Environmental Site Assessment Woodward-Clyde Consultants, Nov. 1990
Rollesby Road, Kings Lynne Norfolk, UK	204	Phase II Environmental Site Assessment, Conestoga- Rovers Associates December 2006 Phase I ESA, CRA, December 2010 Phase I ESA - Amec - March 2014
87 Moo 5 Wellgrow Industrial Estate Thailand	219	Project Postcard Phase I Environmental Site Assessment ERM, August 2007. Soil Quality Analysis Report, S.P.S. Consulting Service Co., Ltd. August 8, 2007 Phase I ESA, CH2M HILL, July 27, 2011



8051 Keele Street, Concord, Ontario	26 and 31	Final Report, 2007 Annual Groundwater Monitoring and Sampling Report Jacques Whitford, February 29, 2008 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
13 Bethridge Road, Toronto, Ontario	5	2007 Annual Groundwater Monitoring and Sampling Report Jacques Whitford, January 2, 2008 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
1 Hegeler Avenue, Danville, Illinois	109	Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc. (hard copy reports were reviewed in brief to support CCL summary)
35 Martin Street, Cumberland, Rhode Island	76	First Five-Year Review Report September 2002, prepared by USEPA Letter from KIK to USEPA regarding planned Site closure September 22, 2008 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
Fockestrasse 11, Laupheim, Germany	125	UST Removal and Soil Excavation, ERM May 2008 Semi-Annual Letter Report, Soil Vapour Extraction, ERM January to June 2008 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
Fockestrasse 12, Laupheim, Germany	126	Phase I ESA AMEC Earth Environmental GmbH, January 6, 2004
8001 Keele Street, Concord, Ontario	26	Final Report, KG Packaging Tank Farm Upgrade Barenco, November 7, 1996 2008 Annual Groundwater Monitoring and Sampling Report Jacques Whitford, ,October 3, 2008 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
JM Mills Landfill, OU2 of Peterson-Puritan Superfund Site Cumberland, Rhode Island	Related to 76	Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
Shpack Superfund Site Attleboro, Massachusetts	Related to 76	Letter - Proposal for Engineering and Construction Related Services ERM, June 19, 2008



		Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
LR R Superfund Site North Smithfield, Rhode Island		Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc. Notice of Assessment (Giarrusso Norton Cooley McGlone, PC) June 27, 2008 Status Update (Giarrusso Norton Cooley McGlone, PC) December 29, 2008
Omega Superfund Site Santa Fe Springs, California	Related to Kolmer	Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc.
LWD Superfund Site Calvert City, Kentucky		
Seaboard Chemical Guilford County, North Carolina		
308 South Rogers Lane, Raleigh, NC	243	Phase I ESA, CRA, April 2011
92 Ark Road, Burlington County, New Jersey	new	Phase I ESA, 92 Ark Road, Burlington County, New Jersey, conducted by Patriot Environmental Management, dated December 2013 Preliminary Assessment Site Investigation Report, 92 Ark Road, Lumberton, New Jersey, conducted by Geosyntec Consultants, dated March 2014
Carroll Dubies Port Jervis, NY	Related to 71	Supporting Documentation for Five-Year Review Cardinal Resources, March 2005 August 2006 Sampling Report Cardinal Resources, November 2006 Summary of Pre-Existing Conditions - Provided to Potential Insurers and prepared by CCL Industries Inc. Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) Phase II ESA, Woodward-Clyde, December 17, 1990 (WWC for CCL)
King Street, Port Jervis, New Jersey (Kolmer)	71	Phase I ESA, Clayton Environmental Consultants, September 19, 1997 (Clayton for CCL) Report of Environmental Evaluation, Law Engineering, December 17, 1997 (Law for OSG)
855 Crowe Road, East Stroudsburg, Pennsylvania	59	Environmental Assessment of Imperial Cosmetic Services, Inc. ManTech Environmental Technology, Inc., January 3, 1996 Phase I ESA, Clayton Environmental Consultants, September 19, 1997



		(Clayton for CCL) Report of Environmental Evaluation, Law Engineering, December 18, 1997 (Law for OSG)
Calle Lateral No. 20 Av. Tequesquinal, Mexico	139	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) Phase I ESA, Clayton Environmental Consultants, September 19, 1997 (Clayton for CCL) Report of Environmental Evaluation, Law Engineering, December 18, 1997 (Law for OSG)
Guillermo Marconi No. 8 and Alessandro Volta No. 7, Mexico	141 133	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL)
23 Truman Road, Barrie, Ontario	42	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) Report of Environmental Evaluation, Law Engineering, December 17, 1997 (Law for OSG) Interoffice Memorandum to Paul Murdoch - February 16, 1995 (CSI for Environmental Compliance Services, Inc.)
King Division, King Street Port Jervis, New York	71	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) Phase II ESA, Woodward-Clyde, December 17, 1990 (WWC for CCL)
45-49 King Road, Hornsby New South Wales, Australia	131	Phase I ESA, AGC Woodward-Clyde Pty Limited, November 1990 Phase I ESA, Clayton Environmental Consultants, September 19, 1997 (Clayton for CCL) Report of Environmental Evaluation, Law Engineering, December 18, 1997 (Law for OSG)
901 Precision Drive, Denton, Texas	228	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) CCL Memorandum to Ken O'Dell from Maurice Smith, January 10, 1994
Lisa Packaging, Creamery Road Ellenville, New York	227	Phase I ESA, Woodward-Clyde, November 1990 (WWC for CCL) Old Notes There is no Law report at time of Divestiture
450 North Sheridan Street Corona, California	84	Level One Environmental Assessment, Woodward- Clyde, November 13, 1990 Phase I ESA, Clayton Environmental Consultants, September 19, 1997



		(Clayton for CCL) Interoffice Memorandum to Paul Murdoch (CSI for Environmental Compliance Services, Inc.) Report of Environmental Evaluation, Law Engineering, December 17, 1997 (Law for OSG)
1490 rue Nobel, Unif F Boucherville, Quebec	175	Environmental and Pollution Liability Assessment AMEC Earth Environmental, May 3, 2004
340 Huronia Road, Barrie, Ontario	19	Phase I ESA, Woodward-Clyde, November 21, 1990
994 Islington and 104 Jutland Road Etobicoke, Ontario	24 and 25	Interoffice Memorandum to Paul Murdoch, February 21, 1995 (CSI for Environmental Compliance Services, Inc.)
80 Paramount Road, Winnipeg, Manitoba	38	Phase I ESA, Earth Tech (Canada) Inc., May 2004
2300 Wisconsin Street Downers Grove, Illinois	115	Facsimile Transmission from Peter Elleman to Bo Sirota Alan Dryden
4110 East Wood Street Phoenix, Arizona	64	Phase I ESA Limited Compliance Review AGRA Earth Environmental, March 19, 1998
1825 Underwood Boulevard Delran, New Jersey	105	Phase I ESA Limited Compliance Review AGRA Earth Environmental, March 24, 1998
10 Bethridge Road, Rexdale, ON 11 Bethridge Road, Rexdale, ON 13 Bethridge Road, Rexdale, ON 2000 Kipling Ave, Rexdale, ON 62 Belfield Road, Rexdale, ON 1296 Martingrove Rd, Rexdale, ON	3 4 5 32 2	Phase I ESA, AMEC Earth Environmental, May 10, 2002
901 Technology Way Libertyville, Illinois	151	Phase I ESA and Environmental Compliance Audit AMEC Earth Environmental, July 7, 2005
Vacant Lot - Rene Descartes Street Saint-Bruno-De-Montarville, Quebec	216	Phase I ESA, Conestoga-Rovers Associates, May 2007 Phase I ESA - CRA - November 2012
East Amidon Street Sioux Falls, South Dakota	180	Phase I Environmental Property Evaluation American Technical Services, Inc., December 8, 2004
120 Stockton Street Hightstown, New Jersey	101	Phase I ESA Limited Compliance Review AGRA Earth Environmental, March 26, 1998 Phase I ESA, Maser Consulting, October 27, 2003 Phase I ESA - Amec - July 2014
Vacant Building 600 East 52nd Street North Sioux Falls, South Dakota	217	Phase I ESA, Conestoga-Rovers Associates, October 2007
1515 Garnet Mind Road Boothwyn, Pennsylvania	185	Phase I ESA Limited Compliance Review AGRA Earth Environmental, January 26, 2005 Phase I ESA, CRA, December 2010
North Gold Drive Washington Township, New Jersey	186	Phase I ESA, U.S. Inspect Commercial Real Estate Services, June 28, 2001 (for CDK Partners)
El Retiro Industrial Park San German, Puerto Rico	157	Environmental and Pollution Liability Assessment AMEC Earth Environmental, March 2003 Phase I ESA, CRA, December 2010
Road 171 KM 0.2, Zona Urbana Cidra, Puerto Rico	142	Phase I ESA, Conestoga-Rovers Associates, May 2007



		Phase I ESA, CRA, December 2010
670 Progress Road Collierville (Memphis), Tennessee	198	Phase I ESA, Township Development Services, LLC, February 27, 2006 Phase I ESA - CRA - November 2012
1 Llodio Drive Hermitage, Pennsylvania	74	Phase I ESA Environmental Compliance Review AGRA Earth Environmental, September 2, 2004 Phase I ESA, CRA, dated November 2010
1 Lasley Avenue Wilkes-Barre, Pennsylvania	150	Phase I ESA, Conestoga-Rovers Associates, December 2007 Phase I ESA - CRA - November 2012
2501 W. Rosecrans Boulevard Compton, California	112	Phase I ESA, PHASE ONE Inc., December 3, 1992 Phase I ESA, Clayton, September 30, 1997 Phase I ESA, Conestoga-Rovers Associates, May 2007
2250 East 220th Street (Building 220) Carson, California	229	Phase I ESA, Conestoga-Rovers Associates, August 2007 Phase I ESA - CRA - November 2012
CD-Design, G.m.b.H, Lindgesfeld 26 42653 Solingen, Germany	218	Phase I ESA, Conestoga-Rovers Associates, February 2008
Eltex IndustHriekennzeichnung G.m.b.H Lindgesfeld 27 Solingen, Germany	224	Environmental Assessment, Phase I Report ERM, November 11, 2008
Steinbeis PPL GmbH Industriestrasse 2 D-83607, Holzkirchen, Germany	181	Phase I ESA AMEC Earth Environmental, January 13, 2005 Phase I ESA, CRA, August 2011
Steinbeis IBL GmbH Bruckenweg 5 D-08393 Meerane, Germany	182	Phase I ESA AMEC Earth Environmental, January 13, 2005 Phase I ESA, CRA, July 2011
68 Rue de Lille "Les Gravelles" 59710 Avelin, France	152	Environmental, Health Safety Disclosure Report Enhessa S.A. - Environmental Policy Centre, October 2001
Jarvis Porter Baulip 35 39 Rue Marcel Dassault Bondy, France	148	Phase I ESA AMEC Earth Environmental, January 15, 2002
20 Rue Louis Arago 91380 Chilly-Mazarin, France	160	Environmental, Health Safety Due Diligence Assessment Report Enhessa S.A. - Environmental Policy Centre, November 18 19, 2002 Phase I ESA, CRA, February 2011
Val d'Atur, F-24759 Steinbeis Packaging S.A. Trelissac Cedex, France	183	Phase I ESA AMEC Earth Environmental, January 13, 2005 Phase I ESA, CRA, March 2011
ITW Austria Vertriebs GES.m.b.H (Auto Sleeve, Austria Werner-Hiesenberg Strasse 6 9100 Voelkermarkt, Kaernten, Austria	200	Phase I ESA, Conestoga-Rovers Associates, December 2006 Phase I ESA, CRA, August 2011
Pachem AG	158	Phase I ESA



Riedstrasse 2 A-6845 Hohenems, Austria		AMEC Earth Environmental, February 23, 2003 Phase I ESA, CRA, August 2011
Inprint Benelux B.V. Ijsselstraat 15 5347 KG Oss, The Netherlands	192	Phase I ESA AMEC Earth Environmental, September 12, 2005 Phase I ESA, CRA, July 2011
3077 Mainway Burlington, Ontario	33	Phase I ESA AGRA Earth Environmental, March 8, 1996 Tank Removal and Soil Inspection Barenco Inc., April 25, 1996
Cafetal Street Nos. 162-A 165-B Col. Granjas Mexico Mexico City, Mexico	135 137	Phase I ESA (for both sites) AGRA Earth Environmental, March 26, 1998
Sara Lee Facility, FINSA Industrial Park Lots 21 and 23, Avenida Michoacan No. 20 Colonia Renovacion, Delegacion Iztapalapa Mexico, Distrito Federal	199	Phase I ESA Pollution Liability Assessment AMEC Earth Environmental, May 4, 2006 Limited Phase II ESA AMEC Earth Environmental, June 20, 2006
Parque Industrial La Luz Cuautitlan Izcalli Edo. De Mexico, Mexico	134	Phase I ESA Compliance Audit AGRA Earth Environmental, April 7, 1997
998 Islington Toronto, Ontario	23	Removal of Fuel Tank Barenco Inc., December 21, 1990
Avery Dennison Corporation, 2845 Center Road, Brunswick, Ohio, USA	Avery	Phase I ESA - ERM - Feb 8, 2013
685 Howard Street, Buffalo, New York, USA	Avery	Phase I ESA - ERM - Feb 8, 2013
15939 Industrial Parkway, Cleveland, Ohio, USA	Avery	Phase I ESA - AECOM - April 19, 2010 Asbestos and Paint Chip Analysis - EA Group - January 30, 2013; Phase I ESA - ERM - Feb 8, 2013 Phase II ESA - CRA - April 19, 2013
29485 Highway 76 East, Clinton, South Carolina, USA	Avery	Additional Subsurface Investigation - ENSR - February 1996; Comprehensive Environmental Assessment - AMEC - September 2001; Voluntary Corrective Action Plan - AMEC - May 19, 2004; Phase I ESA - ERM - Feb 8, 2013
650 705 West 67th Avenue, Schererville, IN, USA	Avery	Various Memos and Documents from 1990 to 2012; Phase I ESA - ERM - Feb 8, 2013 Phase II ESA - CRA - May 10, 2013
17700 Foltz Industrial Parkway, Strongsville, Ohio, USA	Avery	Phase I ESA - ERM - Feb 8, 2013
16 Abrams Street, Units 3 and 4, Balcatta, Western Australia 6021, Australia	Avery	Phase I ESA - ERM - May 2011
1840 Clements Road, Pickering, Ontario	Avery	Phase I ESA - ERM - May 2011
Miesbacher Straße 5, 83626, Oberlaindern-Valley, Germany	Avery	Phase I ESA - ERM - May 2011
Av. Todos los Santos 7651, Parque	Avery	Soil Monitoring and Analysis - InGeco - May 5, 2011;



Industrial Pac fico, Tijuana, Baja California, Mexico		Phase I ESA - ERM - May 2011
Unit 5, Warth Park, Raunds, Northamptonshire, UK	Avery	Phase I ESA - ERM - May 2011
89 Cross Street, Holliston, Massachusetts, United States	Avery	Downgradient Property Status Report - Johnson Company - July 2008; Groundwater Monitoring Results - Johnson Company - August 12, 2010; Phase I ESA - ERM - May 2011
4100 Old Highway 45 North Meridian, Mississippi, United States	Avery	MEMO - Completion of remediation Program - April 24, 1997; Phase I ESA - ERM - May 2011
6987 Calle de la Linea, Suite 101, San Diego, California, United States	Avery	Phase I ESA - ERM - May 2011
00040 - Via Honduras, 15 Pomezia (RM), Lazio, Italy	Avery	Phase I ESA - ERM - May 2011
Industrivej 59 Rønnede, Denmark	Avery	Phase I ESA - ERM - May 2011
11 Carrington Road, Castle Hill, Sydney, New South Wales, Australia	Avery	Phase I ESA - ERM - May 2011
1 Better Way, Chicopee, Massachusetts, United States	Avery	Phase I ESA - ERM - June 2011
3-5 Carl-Zeiss St., Garching St. Germany	added april 1, 2013	Phase I Environmental Site Assessment (ESA), 3-5 Carl-Zeiss Street, Garching, Germany, conducted by Amec Environmental Infrastructure (Amec), dated August 9, 2013
1938 Olney Ave., Cherry Hill, NJ	added Feb 28, 2014	Phase I ESA, 1938 Olney Avenue, Cherry Hill, Camden County, New Jersey, conducted by Marathon Engineering Environmental Services Inc., dated December 20, 2013
Costa Rica 5379, B1667JUU-Pdo. De Malvinas Argentinas, Buenos Aires, Argentina	added Dec 23, 2013	Phase I ESA Reca consultores SRL Sept 2013
711 Rivermede Rd., Vaughan, ON		RSC dated Nov 15, 2012 (existing sites on policy)
Bandfix, Switzerland	added Sept 4, 2014	Environmental Due Diligence Summary (EDDS), Bandfix AG, Industriestrasse 19, 8962 Bergdietikon, Switzerland, conducted by Amec Environmental Infrastructure GmbH, dated July 31, 2014
Aludisc, 520 East Railroad St., Clinton, SC	Added Dec. 29, 2014	Phase I ESA - ATEC - October 10, 1996 Corrective Action Plan - ATC - September 2, 1997 Pollution Incident Form - March 21, 1997 Comprehensive Site Assessment - ATEC - March 1997 Groundwater Monitoring Reports - Proterra - 1999-2003 Update and Monitoring Report - Proterra - March 22, 2006 Voluntary Clean-Up Checklist - Magnolia Properties - October 26, 2007 EMI Leter - August 25, 2011 Limited Site Investigation - Terracon - September 16, 2011 Phase I ESA - AMEC - November 14, 2014 Summary of Groundwater Event - Amec - November 24, 2014
Wixom, MI	added Feb 6, 2015	Phase I ESA - AMEC - December 19, 2014
Guanajuato, Mexico	added	CRA 2007 Phase I ESA



	Feb 9, 2015	
Verona, WI	added Feb 27, 2015	Phase I ESA - Amec Foster Wheeler - February 2015

All other terms and conditions of this Policy remain unchanged.



COVERAGE LIMITATION AND REOPENER ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 32
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The [insured] and the Insurer hereby agree to the following changes to this Policy:

I. COVERAGE LIMITATION:

- ☒ [emergency response costs] *
- ☒ [business interruption loss] *
- ☒ [diminution in value] *
- ☒ [rental income] *
- ☒ [catastrophe management costs] *
- ☒ [remediation costs]
- ☐ [property damage]
- ☐ [bodily injury]

**to the extent applicable due to such Supplemental Coverage being added to this Policy by endorsement hereto.*

Coverage is not afforded pursuant to this Policy for any of the exposures indicated above, including any associated [legal defence expenses] with respect to those specific [pollution conditions] identified in the Schedule of Limited Coverage, below.

II. RE-OPENER OF COVERAGE:

In the event that [closure] is achieved with respect any of the [pollution conditions] identified in Schedule of Limited Coverage, below, then coverage limitations set forth in Section I., above, may be deleted with respect to those [pollution conditions] that achieve such [closure]. The coverage limitations identified in Section I., above, can only be deleted by endorsement to this Policy issued by the Insurer.

III. For the purposes of this Endorsement, [closure] shall mean that the [insured] or [foreign subsidiary] obtains a written No Further Action determination, or otherwise achieves closure in accordance with the regulatory requirements applicable to the subject [pollution conditions] which has been confirmed in writing by the regulatory agency or authority with jurisdiction over the [pollution conditions].

If such [closure] is contingent upon: 1) certain additional actions with respect to the subject [pollution conditions] in order to be effective; or 2) on the use of institutional or engineering controls in effect at a [covered location], then any such additional actions must be completed in order for coverage to be effective pursuant to this Endorsement, and such coverage shall be contingent upon the continued maintenance of said engineering controls and the continued use of the [covered location] in a manner consistent with said institutional control, as applicable, during the [policy period] or any [extended reporting period].



SCHEDULE OF LIMITED COVERAGE

1. **1 Hegeler Lane Danville, IL:** tetrachloroethene, bromodichloromethane, chloroform, 1,1,1-trichloroethane; 1,1-dichloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; trichloroethene; trichlorofluoromethane; vinyl chloride; chloroethane in groundwater.
2. **8051 Keele Street, Concord, ON:** vinyl chloride, 1-1 dichloroethylene; cis-1,2-dichloroethylene; 1,1,1-trichloroethane; trichloroethene; tetrachloroethylene; dichloromethane; toluene; acetone; trans-1,2-dichloroethylene; trichloroethylene; trans-1-3-dichloropropene in both shallow and deep groundwater.
3. **13 Bethridge Road, Rexdale, Ontario:** Acetone; 1,1-dichloroethylene; trichloroethylene; vinyl chloride; 1,1,1-trichloroethane; and pine oil in groundwater.
4. **8001 Keele Street, Concord, Ontario:** Vinyl chloride, 1,1,-dichloroethylene; cis-1,2-dichloroethylene; 1,1,1-trichloroethane; trichloroethylene and tetrachloroethylene in shallow and deep groundwater.
5. **35 Martin Drive, Cumberland, Rhode Island:** 1,1-dichloroethene; 1,2-dichloroethene; methylene chloride; tetrachloroethene; 1,1,1-trichloroethene; ethylbenzene; styrene, toluene, xylenes in soils
35 Martin Drive, Cumberland, Rhode Island: 1,1-dichloroethene; 1,2-dichloroethene; methylene chloride; tetrachloroethene; 1,1,2-trichloroethene; trichloroethene; benzene; vinyl chloride; bis(2ethylhexyl) phthalate, chlordane; acetone, cadmium, copper, arsenic in groundwater
6. **Costa Rica 5379, B1667JUU - Pdo. de Malvinas Argentinas, Buenos Aires** ☐ Argentina: toluene, chromium and total phenols in groundwater.
7. **Nilles, Germany - Moselweinstr, 34 & 32, 54249 Tritteneheim, Germany** - PHCs and degraded PHC byproducts in soil and groundwater due to historical USTs or ASTs
8. **Aludisc - 520 East Railroad Street, Clinton, NC** - 1,1-Dichloroethane (1,1-DCA), 1,2-Dichloroethane (1,2-DCA), 1,1-Dichloroethylene (1,1-DCE), methylene chloride, 1,1,1 trichloroethane (TCA), tetrachloroethylene (PCE), and trichloroethylene (TCE) in groundwater as well as all breakdown daughter products related to the above mentioned contaminants

All other terms and conditions of this Policy remain unchanged.



LOCATION-SPECIFIC PRE-EXISTING POLLUTION CONDITIONS THIRD-PARTY CLAIMS COVERAGE (Divested Properties – Full Retro) ENDORSEMENT (GPPL)

Named Insured CCL Industries Inc.			Endorsement Number 33
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The insured and the Insurer hereby agree to the following changes to this Policy:

Coverage is afforded pursuant to Coverage **B.** of this Policy, **only**, with respect to the covered locations identified in the Schedule of Covered Locations (Divested Locations), below. Further, with respect to the covered locations identified in the Schedule of Covered Locations (Divested Locations), below, Coverage **B.** of this Policy is hereby deleted in its entirety and replaced with the following:

B. THIRD-PARTY CLAIMS COVERAGE (Coverage B.)

Claims and associated legal defence expenses in excess of the self-insured retention arising out of a pollution condition on, at, under, or migrating from a covered location provided the claim is first made during the policy period. Any such claim must be reported to the Insurer, in writing, during the policy period or any applicable extended reporting period.

It is a condition precedent to coverage afforded pursuant to this Coverage **B.** that all pollution conditions first commenced, in whole or in part, prior to the date the covered location has been sold, abandoned, or given away by any insured or foreign subsidiary or was condemned.

Schedule of Covered Locations (Divested Locations)

	<u>Location</u>
132	1008 Pacific Highway, Somersby, NSW, Australia
222	102 Tynte St. Adelaide South Australia
131	45 Kings Road, Hornsby, NSW, Australia
223	Unit 1 & 8, Harcourt Estate, 809821 Botany Road, Rosebery NSW Australia 2018
195	r. Alexandre Humberto Meletta, 602 – Jd. Pinheiros, Valinhos – São Paulo, Brazil
205	Rua Comendador João Lucas, 215, Vinhedo, São Paulo
3	10 Bethridge Road, Etobicoke, Ontario
22	1020 Islington Avenue, Etobicoke, Ontario
25	104 Jutland Road, Etobicoke, Ontario
17	105 Gordon Baker Road, Willowdale, Ontario
4	11 Bethridge Road, Rexdale, Ontario
9	11 Centennial Drive, Penetanguishene, Ontario
5	13 Bethridge Road, Rexdale, Ontario
30	149 Victoria Street, Barrie, Ontario
176	1500 rue Nobel, Boucherville, Québec
12	20 Curity Avenue, East York, Ontario
32	2000 Kipling Avenue, Rexdale, Ontario
42	23 Truman Road, Barrie, Ontario
13	24 Curity Road, East York, Ontario
18	26 Hollinger Road, Toronto, Ontario
14	26 Waterman Avenue, East York, Ontario



34	3070 Mainway Drive, Burlington, Ontario
33	3077 Mainway Drive, Burlington, Ontario
37	3325 North Service Road, Burlington, Ontario
19	340 Huronia Road, Barrie, Ontario
1	410 Avenue LaFleur, Ville La Sale, Québec
7	430 Steelcase Rd. E., Markham, Ontario (Pharmasol Laboratories)
16	5090 Explorer Drive, Mississauga, Ontario
6	5490 Boul. Thimens, Suite 260, St. Laurent, Québec
2	62 Belfield Road, Etobicoke, Ontario
10	626 Chester Road, Delta, B.C.
11	630 Chester Road, Delta, B.C.
29	78 Titan Road, Etobicoke, Ontario M8Z 2J8
38	80 Paramount Road, Winnipeg, Manitoba
26	8001 Keele Street, Concord, Ontario
15	81 Dowty Road, Ajax, Ontario
20	81 Hymus Blvd., Pointe Claire, Québec
210	835 Fuller Avenue, Penetanguishine, ON
8	91 Caldari Road, Concord, Ontario
21	91 Hymus Blvd., Pointe Claire, Québec
28	910 Rowntree Dairy Rd., Units 23 & 24, Woodbridge, Ontario
41	96 Scarsdale Road, Don Mills, Ontario (Office)
24	994 Islington Avenue, Etobicoke, Ontario
23	998 Islington Avenue, Etobicoke, Ontario
175	Apex - 1490 rue Nobel, Unit F, Boucherville, Québec
35	McGregor & Arthur Street, Plan 101, Penetanguishene, Ontario
39	Part Lot 11 and 12, Etobicoke, Ontario
27	Part Lot 25, Concession 1, Etobicoke, Ontario
144	1001 Gu Gao Road, Pudong, Shanghai 201208, P.R. China
145	2005 Yang Gao Beir Road, Pudong, Shanghai, PRC201208 China
226	28J Cross Region Plaza 899 Lingling Rd., Shanghai China 200030
140	5 Esquinas de Tibas, Plaza de Copey, Apto. 1592, San Jose, Costa Rica
164	Midtagaer 2, 2605 Brøndby, Denmark
165	Midtagaer 21, 2605 Brøndby, Denmark
163	Nyager 4, 2605 Brøndby, Denmark
168	Toldbodgate 96, 8900 Randers, Denmark
234	Kirjolantie 7, 21200 Raisio, Finland (moved from Veistämönaukio 1-3, FIN-20 100 Turku)
173	Veistamonaukio 1-3, Fin-20 100 Turku, Finland
148	33/39 Rue Marcel Dassault, 93147 Bondy Cedex, France
152	Bâtiment 3, 68 rue de Lille, 59710 Avelin, France
154	10 Fockestrasse, Laupheim, Germany
125	11 Fockestrasse, Laupheim, Germany
126	12 Fockestrasse, Laupheim, Germany
127	26 Fockestrasse, Laupheim, Germany
128	28 Fockestrasse, Laupheim, Germany
174	Bachstelzenweg 8, D-26515 Wiefelstede/Metjendorf, Germany
133	Alessandro Volta No. 7 (C&E), Parque Industrial, Mexico
135	Calle de Cafetal No. 162-A, Col. Granjas de Mexico, Iztacalco, Mexico D.F.
137	Calle de Cafetal No. 165B, Col. Granjas de Mexico, Iztacalco, Mexico D.F.
138	Calle de Centeno No. 485, Col. Granjas de Mexico, Iztacalco, Mexico D.F.
139	Calle Lateral No. 20 Av., Tequesquinal, Mexico
236	Centeno No. 613, Granjas Mexico, Delegacion Iztacalco, Mexico, D.F. 08400
141	Guillermo Marconi No. 8 (Adirud), Parque Industrial, Mexico



143	Lot No. 2 Manzana XIII, Parque Industrial Cuautla, Tlayecac Ciudad Ayala, Mexico
136	Pino 588 G, Colonia El Arenal Azcapotzalco, Mexico D.F.
149	Bergveste 14, 3993 Houten, The Netherlands
170	Trollasveien 6, N-1410 Kolbotn, Norway
171	U1. Borowskiego 2. Pok 220, PL-03-475, Poland
172	u1. Gdyńska 31/33, PL-61-016 Poznan, Poland
237	ul. Grzybowska 80/82, 00-844 Warszawa, Poland
238	Obvodny kanal emb. 93a, llt.A., office 607 St. Petersburg 191119
239	4 Planken Park, 22 Planken Drive, Plankenburg, Stellenbosh 7600 South Africa
220	Unit 14, Wendywood Commercial Centre, 1 Daphny Street, Wendywood, South Africa 2090
122	10-11 Arkwright Rd., Scunthorpe, UK
119	1-2 Arkwright Rd., Runcorn, UK
146	15 Cliffe Industrial Estate, Lewes, England
123	4 Akinson's Way, Foxhills Industrial Park, Scunthorpe, UK
120	5-8 Arkwright Rd., Runcorn, UK
124	6 Akinson's Way, Foxhills Industrial Park, Scunthorpe, UK
130	6 Seymour Court, Manor Park, Runcorn, Cheshire WA7 1SY, UK
117	8th Avenue Fixborough Industrial Estate, Scunthorpe, UK
121	9 Arkwright Rd., Runcorn, UK
118	Abbey Ct. Menasha Way, Scunthorpe, UK
190	Consort Way, Burgess Hill, West Sussex RH15 9YS, United Kingdom
147	Ingram Row, Leeds, England LS11 9AU
187	Napier Road, Wardpark North, Cumbernauld, Glasgow, Scotland
129	Pond Lane, Parkfields, Wolverhampton, UK
116	South Humberside Industrial Estate, Grimsby, UK
159	Unit B, Cefndy Rd., Employment Park, Rhyl, Wales LL182TT
49	1 American Way, Sharon, PA U.S.A.
52	1 Blue Hill Plaza, Pearl River, NY U.S.A.
208	10 Council Drive, Wheatland, PA 16161
69	1073 Industrial Rd., Bldg. E, Cold Spring, KY 41076 U.S.A.
103	1100 Touhy Ave., Elk Grove Village, Ill U.S.A.
102	11328 Sunrise Gold Cir. Rancho, Cordoba, CA U.S.A.
90	123 Pike St., Port, Jervis, NY U.S.A.
189	124-126 Point West Boulevard, St. Charles, MO 63303, USA
86	1408 North Minnesota Ave., Sioux Fall, S.D. 57104 U.S.A.
78	1500 McConnell Rd., Woodstock, Ill U.S.A.
185	1515 Garnet Mine Rd., Boothwyn, PA
96	1616 S. California Ave., Monrovia, CA 91016 U.S.A.
51	165 Bank St., Hightstown, NJ 08520 U.S.A.
99	1725 South 3rd St., Memphis, Tenn. 38109 U.S.A.
105	1825 Underwood, Delran, NJ, U.S.A.
87	1925 Wright Ave., La Verne, CA 91750 U.S.A.
50	20 Ashton Ave., Swedesboro, NJ 08085 U.S.A.
57	20 Controls Dr., Shelton, Connecticut, 06484 U.S.A.
201	2003 Case Parkway South, Unit #3, Twinsburg, Ohio, USA
211	2130 Broadway Road, Hermitage, PA 16148
44	2300 4th & Townsend, Chester PA U.S.A.
115	2300 Wisconsin Ave., Downers Grove, ILL U.S.A.
77	235 Martin Rd., Cumberland, RI U.S.A.
112	2501 W. Rosecrans Avenue, Los Angeles, CA 90059 U.S.A.
244	2617 Commerce Circle, Irondale, Alabama USA



65	263 Gayoso Ave., Memphis, TN U.S.A.
62	263-265 E. Belz Blvd., Memphis, TN U.S.A.
54	2702 Cindel Dr., Unit 3A Delran, Cinnaminson, NJ U.S.A.
79	278 Monmouth St., Hightstown, NJ U.S.A.
106	285 Union Ave., Memphis, TN 38103 U.S.A.
73	3 Linda Lane, Suite B, Vinceton, NY U.S.A.
58	30 Controls Dr., Shelton, Connecticut, 06484 U.S.A.
55	3367 Commissary, Plattsburgh, Airbase, NY 12901 U.S.A.
81	3642 Muddy Creek Rd., Cincinnati, OH U.S.A.
113	3703 W. Tickman St., Sioux Falls, SD U.S.A.
72	4 Linda Lane, Southampton, NY U.S.A.
91	4 Plant St., Plattsburgh, NY 12901 U.S.A.
63	4014 E. Broadway Rd., Suite 410, Phoenix, AZ 85040 U.S.A.
61	4083 E. Airport Dr., Ontario, CA 91761 U.S.A.
64	4110 East Wood Street, Phoenix, AZ U.S.A.
97	4131 S. State St., Chicago, Ill U.S.A.
94	425 Rose Lane (Riverwood), Matamoras, PA U.S.A.
43	4460 40th St., S.E., Grand Rapids, MI U.S.A.
84	450 N. Sheridan St., Corona, CA U.S.A.
45	4607 4th Avenue N., Sioux Falls SD U.S.A.
88	500 Park Blvd., Ste. 776, Itasca, ILL 6014303121 U.S.A.
111	50000 W. Pontiac Trail, Wixom, MI U.S.A.
92	50050 Pontiac Trail, Wixom, MI U.S.A.
80	5500 Muddy Creek Rd., Cincinnati, OH U.S.A.
217	600 East 52nd St. N., Sioux Falls, SD, USA
110	6100 W. Howard St., Niles, Ill U.S.A.
83	6133 N. River Rd., Rosemont, Ill U.S.A.
104	6310-6330 Touhy Ave., Niles, Ill U.S.A.
66	64 Genung St., Middleton, NY U.S.A.
53	717 C-E Fellowship Rd., Mt. Laurel, NJ 08054 U.S.A.
89	77 Park St., Montclair, NJ U.S.A.
75	8 Marlen Drive, Robbinsville, NJ
209	801 Technology Way, Libertyville, IL 60048
82	810 N. Main St., Harrisonburg, VA U.S.A.
59	855 Crowe Rd., E. Stroudsburg, PA 18301 U.S.A.
100	8800 South Street, Charlotte, NC 28273 U.S.A.
228	901 Precision Drive, Denton, TX 76201
151	901 Technology Way, Libertyville, Illinois 60048
47	9th & Hawkins St., Carrollton, KY 41008-0326 U.S.A.
48	Airport Addition to Sioux Falls, SD Lot 2, Block 53 U.S.A.
46	Belle Drive, Harrisonburg, VA
212	Block 21.01, Portion of Lots 4,5,6,7 and 11, Borough of Hightstown, Mercer County, New Jersey
60	Dean Memorial Drive, P.O. Box 7282, Cumberland, RI 02864 U.S.A.
70	Jervis St. & Menard Ave., Niles, Ill (Parking Lot) U.S.A.
71	King & Lumber Sts., Port Jervis, NY U.S.A.
227	Lisa Packaging, Creamery Road, Ellenville, NY
85	Neversink Ave., Port Jervis, NY U.S.A.
93	R.R. #1, Terre Haute, Ind. U.S.A. (2001 North Hunt Street)
95	Ross Lane, Danville, Ill U.S.A.
98	Skyline Dr., PT., Jervis, NY U.S.A.
180	Tract A, Lot 6 in Block 3 of Sioux Empire Three East Addition, East Amidon St., Sioux Falls, SD



276	4800 North Federal Highway, Suite 205 D, Boca Raton, FL 33431
277	150 North Martingale Road, Suite 260, Schaumburg, IL 60173
278	125 Half Mile Road, Suite 200, Red Bank, NJ 07701-6749
279	250 & 252 Ponce De Leon Ave, Hato Rey, Puerto Rico 918
280	1895 Crooks Road, Troy, MI 48099
284	1840 Clements Road, Pickering, ON L1W 3R8
285	Ruta Panamericana 28047, Don Torcuato, B1611HGF, Buenos Aires, Argentina
286	Parque Industrial Sur, Calle 108, entre 2 y 4, Codigo Postal: D5700LD, San Luis, Argentina
287	Hauptplatz 19, Wr. Neustadt, Vienna, Austria
288	Cadastral Plot No 35, Industrivej 59, Ronnede, Denmark DK-4683
294	131-13 Handa Hinoe, Kanedacho, Shikokuchuo, Ehime 799-0122 Japan
304	IPKAS Sitesi 3. Kısım, B Blok No:11 İkitelli Organize Sanayi Bölgesi 34303 Istanbul, Turkey

All other terms and conditions of this Policy remain unchanged.

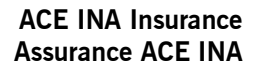


TRADE OR ECONOMIC SANCTIONS ENDORSEMENT

Named Insured CCL Industries Inc.			Endorsement Number 33
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This insurance does not apply to the extent that trade or economic sanctions or other laws or regulations prohibit us from providing insurance, including, but not limited to, the payment of claims. All other terms and conditions of policy remain unchanged.



Named Insured CCL Industries Inc.			Endorsement Number 35
Policy Symbol EIL	Policy Number 333621	Policy Period March 31, 2015 to March 31, 2018	Effective Date of Endorsement March 31, 2015
Issued By (Name of Insurance Company) ACE INA Insurance			

ACE INA Insurance Assurance ACE INA

A. Hally.

[illegible]

A. Andrew Hollenberg
President

LAMR/msp02-wp60

"XT/L"

PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY

SUPPLEMENT AND AMENDMENT TO LEASE CONTRACT

PROJECT NO.: S-0551-0-60 & S-0551-1-63
 LOCATION: SAN GERMAN, PUERTO RICO

NOW COMES the PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY (hereinafter referred to as the "LANDLORD") and INSERT CORPORATION OF PR (INSERT CO.), INC. (hereinafter referred to as the "TENANT") and agree to supplement and amend a certain Lease Contract entered into by them on April 23, 1987, as subsequently amended (hereinafter referred to as the "Contract"), covering certain landsite and buildings located at San Germán, Puerto Rico, identified as Project No. S-0113-0-52 (hereinafter referred to as the "Original Premises"), in the following aspects:

ONE: LANDLORD hereby demises and lets unto TENANT, and TENANT hereby leases from LANDLORD the Premises identified as Project No. S-0551-0-60 & S-0551-1-63 located at San Germán, Puerto Rico (hereinafter referred to as the "Additional Premises"), which are fully described in Schedule "A" hereto annexed and made a part hereof.

TWO: Premises shall be used and occupied exclusively in the manufacture of PRINTED MATERIALS (SIC. #02752).

THREE: TENANT shall hold the "Additional Premises" for a period of ten (10) years, commencing on the date of delivery of the building (S-0551-0-60 & S-0551-1-63). The term of the Lease Contract covering the "Original Premises" (S-0113-0-52), is hereby amended, so that it expires at the same date of the term of lease for the "Additional Premises" (S-0051-0-60 & S-0051-1-63).

FOUR: Commencing on the first day of the following month after the commencement of the term of this Supplement to Lease Contract, TENANT shall pay to LANDLORD an annual rental for the "Additional Premises" of \$2.20 per square foot of gross building area during the first sixty (60) months of the term of this lease and of \$2.75 per square foot of gross building area during the last sixty (60) months. This rental shall be paid in equal monthly installments of \$6,946.86 for the first sixty (60) months and of \$8,683.57 for the last sixty (60) months. For the "Original Premises" (Project Number S-0113-0-0-52) TENANT shall pay LANDLORD the annual rental established in the Lease Contract executed on April 23, 1987, and subsequently TENANT shall pay the annual rental in effect at the San Germán region on that last date until the expiration of the term, as hereby amended.

The monthly installments for rent specified herein shall be paid in advance on the first day of each month at LANDLORD'S office, or at any other place that LANDLORD may notify. In the event that the date of commencement does not fall on the first of the month, TENANT further agrees to pay the first partial monthly installments, prior to, or on the date of commencement.

FIVE: The deposit required under the provisions of this contract shall be complied with by TENANT as hereinafter specified: a) the amount of \$1,736.72 previously deposited by TENANT to reserve Project S-0551-0-60 & S-0551-1-63, CR #134222 of February 21, 1995, b) the amount of \$8,266.07 shall be paid by TENANT in certified check with the execution of this Supplement to Lease Contract.

INITIALS HERE

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This Deposit shall guarantee the compliance by TENANT of its obligations, under this Contract, particularly, but not limited to, the payment of rent, the compliance of the environmental clauses herein included and the return of the Premises in proper condition at the termination of this Lease. On said termination, if TENANT is not in default of any of the terms and conditions of this Contract, LANDLORD will return to TENANT the sum of money, if any, held pursuant to this provision, after LANDLORD's Environmental Office certifies that there are no environmental deficiencies as a result of TENANT's manufacturing operation on the demised Premises.

SIX: TENANT agrees to have on the date of commencement of the term of this Lease a capitalization of \$231,665.00.

Likewise TENANT agrees to install within six (6) months from the same date manufacturing machinery and equipment with a value of at least \$1,208,803.00.

This shall not include the cost of transportation and installation thereof, nor its ordinary depreciation after installation; and within eighteen (18) months from the date of commencement of the term, to employ a minimum of fifty (50) persons in addition to the fifty (50) persons required to be employed at the original premises. The aforementioned levels shall be maintained throughout the term of this Lease or any extension thereof and shall be in addition to the capitalization, machinery and employment levels established in the original Contract.

SEVEN: All notices, demands, approvals, consents and/or communications herein required or permitted shall be in writing. If by mail, should be certified and to the following addresses; to LANDLORD: P.O. Box 362350, San Juan, Puerto Rico 00936-2350. To TENANT: Mr. Oscar Díaz, P.O. Box 377, San Germán, Puerto Rico 00863, Tel. 892-4586.

EIGHT: TENANT must comply, if required, with the rules and regulations of pretreatment established by the Puerto Rico Aqueduct and Sewer Authority, the Environmental Quality Board and the Environmental Protection Agency related to the industrial effluent discharged into the sanitary sewer system and their final disposition. Also, any improvement necessary to provide pre-treatment facilities for the above mentioned effluents shall be at TENANT'S own cost and expense and shall be conducted in coordination with LANDLORD'S Engineering and Maintenance Departments.

NINE: It is hereby agreed and understood that TENANT, at its own cost and expense, shall install an air conditioning system in the demised premises, in the event TENANT needs to use and/or install it in its process. Such air conditioning system shall be considered as a special facility from LANDLORD, and it shall be installed in coordination with LANDLORD'S Engineering and Maintenance Departments.

TEN: TENANT certifies and guarantees that at the date of subscribing this Contract it has submitted the Corporate Tax Returns Forms during the last five (5) years and does not have any tax debt pending with the Commonwealth of Puerto Rico, or is complying with the terms of a payment plan duly approved.

TENANT also certifies and guarantees that at the date of execution of this Contract it has paid unemployment insurance compensation, temporary disability insurance, and the driver's social security (as applicable); or is complying with a payment plan duly approved.

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STG	STG

TENANT acknowledges that this is an essential condition of the Contract and if the above certification is incorrect in any of its parts, LANDLORD may cancel this Contract.

ELEVEN: LANDLORD reserves the right to audit the leased premises from time to time during the term of this contract, as LANDLORD may deem necessary, in order to assess all aspects of the environmental condition of said premises and TENANT's compliance with all environmental legislation and regulations, under Commonwealth and federal law; TENANT hereby agrees to provide access to all areas and structures of the premises for these purposes, upon LANDLORD's request, and to also provide access to all books, records, documents and instruments (except any confidential and/or privileged information and/or any trade secrets) which LANDLORD may deem necessary in order to fully audit the premises as herein stated.

TWELVE: TENANT shall furnish to LANDLORD, in addition to any other information, documents or instruments that may be required in this Contract:

- a) Prompt written notice of the occurrence of any event that by law or regulation would require any oral, telephonic or written notice or communication to the US Environmental Protection Agency and/or to the Puerto Rico Environmental Quality Board, or any successor agency, and copies of all orders, notices or other communications and reports received, made or given in connection with any such event, and any enforcement action taken against TENANT or against any property owned, occupied or used by TENANT;
- b) Quarterly certifications subscribed by an authorized representative designated by TENANT, as to the environmental condition of the leased premises, containing the information required by LANDLORD, which is specified in the form included as Schedule "B" of this contract, or any subsequent modification thereto;
- c) Any other information and documents relating to TENANT's compliance with environmental legislation and regulations under federal and commonwealth laws.

THIRTEEN: Environmental Protection and Compliance - TENANT shall, at TENANT's own cost and expense, maintain the Premises in thoroughly clean conditions; free from solid waste, rubbish, garbage and/or other obstructions. Specifically TENANT shall not use said Premises, or allow it to be used, as a depository of, or as a dump for raw material, waste materials of any kind (including hazardous waste) as defined by the Resource Conservation and Recovery Act (RCRA), toxic or non-toxic substances. TENANT shall neither make any excavation for the purpose of storing, putting away and/or concealing raw materials or waste material of any kind. Underground storage of substances is specifically prohibited.

TENANT shall not conduct or authorize any activities at the Premises which may contribute to or result in a hazardous condition. TENANT shall not store in the Premises flammable or toxic substances without taking the proper precautions and complying with all applicable Federal, State and/or Municipal laws and regulations.

Should TENANT's activities at the Premises require the storage of hazardous and/or toxic materials and/or wastes, TENANT shall notify LANDLORD in writing. TENANT shall furnish LANDLORD with a copy of any and all permits issued for such storage activities.

INITIALS HERE

TENANT shall also, at TENANT's own cost and expense, construct and maintain the processes or operating procedures within the Premises in compliance with the terms, conditions and commitments, if any, contained or specified in any Environmental Impact Statement, Environmental Assessment or any other analogous document reviewed by the Puerto Rico Economic Development Administration/LANDLORD as lead agency or by any other governmental agency in connection with the approval of the project.

TENANT shall also serve LANDLORD with a copy of any lawsuit, notice of violation, order to show cause or any other regulatory or legal action against TENANT in any environmentally-related case or issue.

TENANT shall also serve LANDLORD with a copy of any permits granted to TENANT for air emissions, water discharge, solid waste generation, storage, treatment or disposal, and for any hazardous or toxic waste raw materials or by-products used or generated, stored, treated and/or disposed.

TENANT shall also serve LANDLORD with a copy of any filing or notice to be filed by TENANT with any regulatory agency on any environmentally related case or issue, including but not limited to any matter involving underground or surface water pollution, hazardous or toxic waste spillage and ground contamination. The notice to LANDLORD shall take place no later than the actual filing for the pertinent documents with the regulatory agency.

TENANT further agrees and undertakes to install in the Premises, at its own cost and expense, such devices as may be necessary to prevent that any hazard, which may be caused or created by its operations may affect the environmental integrity of the landsite or may affect or cause any nuisance to adjacent TENANTS or the community in general, it being agreed and understood that creating or causing any such nuisance, shall be deemed an additional event of default under the provisions of this Contract.

TENANT further agrees and undertakes to abide by and comply with any and all rules, regulations and requirements of the Fire Department relative to the use and storage of raw materials, finished products or inflammable materials, or of any other governmental agency, having jurisdiction thereon, applicable to TENANT's operations at the premises, and if requested by LANDLORD, shall submit evidence of such compliance; it being agreed and understood that noncompliance by TENANT with any of the aforementioned rules, regulations and requirements shall be deemed, in each of such cases, an additional event of default under the provisions of this Contract.

TENANT agrees to indemnify, defend and hold harmless LANDLORD from and against and in respect of any and all claims, damages, losses, liabilities and expenses, lawsuits, deficiencies, interest, fines, penalties, attorneys' and consultants fees, and all amounts paid in defense or settlement of the foregoing, which may be imposed upon or incurred by LANDLORD or asserted against LANDLORD by any other party or parties (including government agencies) in connection with any environmental conditions or any noncompliance with any federal, state, or local environmental laws, regulations or policies, caused by or resulting from activities conducted at the additional premises by TENANT after the date of this agreement.

LANDLORD agrees to indemnify, defend and hold harmless TENANT, its subsidiaries, affiliates, successors, and assigns, and its respective directors, officers, employees, shareholders, representatives, and agents (hereinafter collectively referred to as "TENANT", from and

INITIALS HERE



against and in respect of any and all claims, damages, losses, liabilities and expenses, lawsuits, deficiencies, interest, fines, penalties, attorneys' and consultants fees, and all amounts paid in defense or settlement of the foregoing, which may be imposed upon or incurred by TENANT or asserted against TENANT by any other party or parties (including government agencies) in connection with any environmental conditions (whether now known or hereafter discovered) or any activity or non-compliance with any federal, state, or local environmental laws, regulations or policies, caused by or resulting from activities conducted before the date of this Agreement. Without limiting the generality of the foregoing, LANDLORD's indemnity shall also cover the past current or future activities of LANDLORD, or any person holding an interest in or having a right to possession of any portion of the Additional Premises through LANDLORD.

FOURTEEN: TENANT hereby guarantees to LANDLORD, that, neither he, or any of its stockholders, in case of a corporation, owes any money to LANDLORD under its corporate name or any other corporate name and/or person.

FIFTEEN: TENANT shall not transfer, lease, burden or dispose of in any way of the equipment used on its operations without the previous written notice to LANDLORD.

SIXTEEN: TENANT shall not sell, lease or transfer in any way its operations to any other tenant without the previous written consent of LANDLORD, which consent shall not be unreasonably withheld.

SEVENTEEN: LANDLORD shall provide an electrical distribution system consisting of a 200 AMP meter base, conduits, conductors, receptacles and junction boxes as indicated in PRIDCO's Electrical Distribution System Drawings for the Additional Premises.

EIGHTEEN: TENANT shall, at its own cost and expense, construct and/or install all necessary equipment required to connect the building's electrical system to the Puerto Rico Electrical Power Authority's electrical distribution lines, such connection to be made in compliance with the requirements of PREPA.

NINETEEN: LANDLORD agrees that TENANT shall notify LANDLORD in writing before undertaking any non-structural improvements to the "Additional Facilities".

TWENTY: If Tenant enters into a Purchase Agreement with Landlord for the Additional Premises, for purposes of assessing the Purchase Price, the improvements thereto shall not be taken into consideration and the property shall be considered as if it were in the condition as of date of this Agreement.

TWENTY ONE: Inasmuch as TENANT represented that in order to carry out its operations it is necessary to use, operate and maintain a printing machine; it is hereby specifically agreed and understood that:

- (1) Such installation shall be made in coordination with LANDLORD;
- (2) TENANT shall request and obtain from the Environmental Quality Board, the necessary permit to operate the said installation and, thereafter, shall abide by and comply with all requirements imposed by the said Board for such operations.

INITIALS HERE

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It being further agreed and understood that non-compliance by TENANT with the foregoing provisions shall constitute an additional event of default under the provisions of this Contract.

TWENTY TWO: Anything herein to the contrary notwithstanding, the parties have agreed and understood that the following special facilities, shall be utilized by TENANT "AS IS" and "WHERE IS", free of charge, but TENANT shall repair and maintain said special facilities as provided under the applicable provisions of the Contract:

A) SPRINKLER SYSTEMS

The above mentioned special facilities shall be deemed an integral part of the demised premises and as such subject to and covered by the terms and conditions of this contract as they may be applicable thereto.

TWENTY THREE: LANDLORD does hereby warrant that at the time of the commencement of the term of this Lease (of the "Additional premises"), the premises may be used by TENANT for the manufacturing purposes herein intended which are deemed consistent with the design and specifications.

Notwithstanding, LANDLORD agrees to paint or repair any part of the exterior paint of the building as it may be necessary.

Subsequently, any additional painting or repair shall be made according to the terms of the Contract.

TWENTY FOUR: All terms and conditions of the Lease Contract executed on April 23, 1987 shall be deemed supplemented and amended to the extend inconsistent with the terms hereof and the ones not expressly supplemented and amended shall remain in full force and effect.

TWENTY FIVE: TENANT agrees to submit to LANDLORD within thirty (30) days from the date of execution of this Contract a certificate of a resolution of its Board of Directors either authorizing or ratifying the execution of this Contract.

IN WITNESS WHEREOF, LANDLORD and TENANT have respectively signed upon proper authority this Lease, this 15 day of August, 1995.

PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY

BY: 

INSERT CORPORATION OF PR (INSERTCO) INC.
66-039-6322

BY: 

SCHEDULE "A"

DESCRIPTION OF A PARCEL OF LAND LOCATED AT THE
RETIRO INDUSTRIAL PARK, SAN GERMAN, PUERTO RICO
(LOT WHERE PROJECTS S-0551-0-60 AND S-0551-1-63
ARE LOCATED)

Parcel of land, Lots #4 and #6, located at the Retiro Industrial Park, San Germán, Puerto Rico.

IT BOUNDS: by the North, with property of Mr. Ernesto Quiñones Sambolín; by the South, with street "B" of the same industrial park; by the East, with lot #10 of the same industrial park; by the West, with Lot #1 of the same industrial park and street "B" of the same.

DESCRIPTION OF BUILDING NO. S-0551-0-60
LOCATED AT SAN GERMAN, PUERTO RICO

STRUCTURE : Pitched type building consisting of reinforced concrete foundations, structural steel columns and girders supporting 30 feet long steel joists which in turn support 22 gage standard galvanized steel deck. Roof ventilators are provided.

INSULATION AND WATER PROOFING : One (1) inch fiber glass insulation panel and waterproofing system consisting of a three-ply built up roof.

DIMENSIONS : Structure consists of a main floor 120' -10" x 180' -8" out to out dimensions with an area of 21,830.36 square feet; and one (1) lean-to area 45' -2 x 11' -0" for an area of 496.87 square feet; one entrance porch 21' -3" x 9' -3" for an area of 196.56 square feet, for a total covered area of 22523.79 square feet.

FLOOR : Consists of 4" thick reinforced concrete slab with a monolithic finish designed for a live load of 150 pounds per square foot.

WALLS : Exterior are concrete block plastered on both sides.

Interiors are concrete block plastered and painted on both sides with a 6' -1" high sprayed-on glazed finish wainscoat.

DOORS : Interiors are made of plywood and exterior are industrial type metal ones. Has one roll-up metal doors 10' -0" x 10' -0".

WINDOWS : Are miami aluminium louvers throughout the building.

INITIALS HERE

CLEARANCE : Inside the building is 12' -0" from finish floor to lower part of beam at the side eaves.

DESCRIPTION OF BUILDING NO. S-0551-1-60
LOCATED AT SAN GERMAN, PUERTO RICO

STRUCTURE : Pitched type building consisting of reinforced concrete foundations, structural steel columns and girders supporting 30 feet long steel joists which in turn support 22 gage standard galvanized steel deck. Roof ventilators are provided.

INSULATION AND WATER PROOFING : One (1) inch fiber glass insulation panel and waterproofing system consisting of a three-ply built up roof.

DIMENSIONS : Structure consists of a main floor 120' -0" x 120' -10" out to out dimensions with an area of 14,620.43 square feet; and one (1) lean-to area 31' -2 x 10' -6" for an area of 327.29 square feet; a covered loading platform 26' -0" x 16' -2" for an area of 420.42 square feet, for a total covered area of 15,368.14 square feet.

FLOOR : Consists of 4" thick reinforced concrete slab with a monolithic finish designed for a live load of 150 pounds per square feet.

WALLS : Exterior are concrete block plastered on both sides.

Interiors are concrete block plastered and painted on both sides with a 6' -1" high sprayed-on glazed finish wainscoat.

DOORS : Interiors are made of plywoods and exterior are industrial type metal ones. Has one roll-up metal doors 10' -0" x 10' -0".

WINDOWS : Are miami aluminium louvers throughout the building.

CLEARANCE : Inside the building is 12' -0" from finish floor to lower part of beam at the side eaves.

INITIALS HERE

COMPLIANCE REPORT OF WITH
ENVIRONMENTAL REQUIREMENTS

In the period of _____ to _____

I. PERMITS

PERMITS NUMBER	EXPIRATION DATE	RENEWAL DATE (IF APPLY)
----------------	--------------------	----------------------------

II. COMPLIANCE ACTIONS

REFERENCE/CASE NUMBER	DATE	RESPONSE OF DATE OF
-----------------------	------	------------------------

III. CERTIFICATION

I certify, under penalty of law, that this document was prepared under my supervision and direction; and that was based in my investigation by the persons directly responsible of gathering the information, that the information here submitted is, according to my best judgment, certain, complete and precise.

INITIALS HERE

PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY
G.P.O. BOX 2350
SAN JUAN, PUERTO RICO 00936

LEASE CONTRACT

PROJECT # S

LOCATION: S

THIS AGREEMENT ENTERED into on April 23, 1987 by:
AS "LANDLORD", THE PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY, AND
AS "TENANT", INSERT CORPORATION OF P.R. (INSERTCO) INC.

WITNESSETH

WHEREAS, LANDLORD is the owner of a certain landsite and building, identified in the Epigraph, hereinafter referred to as the Premises.

WHEREAS, LANDLORD has agreed to lease to TENANT, and TENANT has agreed to hire from LANDLORD the Premises.

NOW THEREFORE, in consideration of the foregoing premises, the parties herein agree on this Lease subject to the following:

TERMS AND CONDITIONS

ONE: LANDLORD hereby demises and lets unto TENANT, and TENANT hereby Teases from LANDLORD the Premises which are fully described in Schedule "A" hereto annexed and made a part hereof.

The Premises are subject to the encumbrances, liens and/or restrictions, if any, that may appear from said Schedule "A". Furthermore, the air rights of the Premises, are excepted and reserved to LANDLORD.

TWO: The Premises shall be used and occupied exclusively in the manufacture of ~~printed materials~~ (Sic. 02752)

THREE: TENANT shall hold the Premises for a period of ten (10) years to commence on ~~(SEE CLAUSE FIFTY) MAY 1, 1987~~ May 1, 1987 - Termino 4/24/87

or on delivery of the Premises, whichever date occurs first. 4/24/87

FOUR: TENANT shall pay to LANDLORD, an annual rental of \$ ----- per square foot of gross building area during the first sixty (60) months of the term of this Lease and of \$ ----- per square foot of gross building area during the last sixty (60) month. This rental shall be paid in equal monthly installments-----

10/1/87----- (SEE CLAUSE FIFTY)-----
\$ ----- for the first sixty (60) months and of
\$ ----- for the last sixty (60) months.

The monthly installments for rent specified herein, shall be paid in advance on the first day of each month at LANDLORD'S office*(1), or at any other place that LANDLORD may notify. In the event that the

A.R. *(1) by mail
YEM/ [Signature]
JLE/ [Signature]

INITIAL HERE
: A.R. :
: [Signature] :
: [Signature] :

date of commencement does not fall on the first of the month, TENANT, further agrees to pay the first partial monthly installments, prior to, or on the date of commencement. *4-23-87 #1,718.20*

FIVE: Simultaneously herewith TENANT shall deposit with LANDLORD the amount of \$1,718.20----- in Certified Check. *CR-119525*

This deposit shall guarantee the fulfillment by TENANT of its obligations, under this Contract, particularly, but not limited to, the payment of rent and the return of the Premises in proper condition at the termination of this Lease. On said termination, if TENANT is not in default of any of the terms and conditions of this Contract, LANDLORD will return to TENANT the sum of money, if any, held pursuant to this provision.

SIX: TENANT agrees to have on the date of commencement of the term of this Lease a capitalization of \$288,297.00.

Likewise TENANT agrees to install within six (6) months from the same date manufacturing machinery and equipment with a value of at least \$297,729.00.

This shall not include the cost of transportation and installation thereof, nor its ordinary depreciation after installation; and within eighteen (18) months from the date of commencement of the term, to employ a minimum of ----- production workers. *G.R.* *60*

Sixty (60)----- production workers. *60*

The aforementioned levels, shall be maintained throughout the term of this Lease or any extension thereof.

SEVEN: All notices, demands, approvals, consents and/or communications herein required or permitted shall be in writing. If by mail should be certified and to the following addresses, to LANDLORD: G.P.O. Box 2350, San Juan, Puerto Rico 00936. To TENANT:

Mr. Alexis Rosado Díaz
President
P.O. Box 513
San Germán, Puerto Rico 00753
Telf- 892-4586 and 892-1268

EIGHT: Net Lease - This Lease shall be interpreted as a net lease; it being the exclusive responsibility of TENANT to pay for all operating expenses, utilities, maintenance, expenses, insurance, taxes or any other cost, expenses or charges of any nature not specifically assumed by LANDLORD hereunder.

NINE: Warranty as to use - LANDLORD does hereby warrant that at the time of the commencement of the term of this Lease, the Premises may be used by TENANT for the manufacturing purposes herein intended which are deemed consistent with the design and construction in accordance with the corresponding plans and specifications.

TEN: Alterations - TENANT shall make no alterations, additions or improvements to the Premises without the prior consent of LANDLORD* and all such alterations, additions or improvements made by or for

*(1) subject to the provisions of Article 25 of this Contract.

** (2) which consent shall not be unreasonably withheld.

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TENANT, shall be at TENANT'S own cost and expenses and shall, when made, be the property of LANDLORD without additional consideration and shall remain upon and be surrendered with the Premises as a part thereof at the expiration or earlier termination of this Lease, subject to any right of LANDLORD to require removal or to remove as provided for hereinafter.

In the event TENANT asks for LANDLORD'S consent for any alteration; LANDLORD may at its option, require TENANT to submit plans and specifications for said alteration. Before commencing any such work, said plans and specifications, if required, shall be filed with and approved by all governmental agencies having jurisdiction thereof, and the consent of any mortgagee having any interest in or lien upon this Lease shall be procured by TENANT and delivered to LANDLORD if required by the term of the mortgage.

Before commencing any such work, TENANT shall at TENANT'S own cost and expense, deliver to LANDLORD a General Accident Liability Policy more particularly described in Article THIRTY (30) hereof, but said policy shall recite and refer to such work, and in addition thereto, if the estimated cost of such work is more than FIVE THOUSAND DOLLARS (\$5,000.00), TENANT shall, at TENANT'S own cost and expense, deliver to LANDLORD a surety bond, or a performance bond from a company acceptable to LANDLORD, or a similar bond or other security satisfactory to LANDLORD, in an amount equal to the estimated cost of such work, guaranteeing the completion of such work within a reasonable time, due regard being had to conditions, free and clear of materialmen liens, mechanics liens or any other kind of lien, encumbrances, chattel mortgages and conditional bills of sale and in accordance with said plans and specifications submitted to and approved by LANDLORD. At LANDLORD'S option TENANT shall provide a blanket written guarantee in an amount sufficient to satisfy LANDLORD as to all alterations, changes, additions and improvements to the Premises in lieu of separate guarantees for each such project.

TENANT shall pay the increased premium, if any, charged by the insurance companies carrying insurance policies on said building, to cover the additional risk during the course of such work.

ELEVEN: Power Substation - If required by TENANT'S operations, TENANT shall, at its own cost and expenses, construct and/or install a power substation and connect it to the PUERTO RICO ELECTRICAL POWER AUTHORITY (PREPA) distribution lines, for voltages up to 13.2 KV; and to PREPA transmission lines for voltage of 38 KV, all in conformity with PREPA'S requirements. Such construction shall, in no event, be undertaken by TENANT until after LANDLORD has approved the location thereof, as well as the routing of the power line extension.

TWELVE: Repairs and Maintenance - TENANT shall, at TENANT'S own cost and expense, put, keep and maintain in thorough repair and good order and safe condition the building and improvements standing upon

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the Premises at the commencement of the term hereof or thereafter erected upon the Premises, or forming part of the Premises, and their full equipment and appurtenances, the sidewalk areas, sidewalk hoists, railings, gutters, curbs and the like in from of the adjacent to the premises, and each and every part thereof, both inside and outside, extraordinary and ordinary, and shall repair the whole and each and every part thereof in order to keep the same at all times during the term hereof in thorough repair and good order and safe conditions, whenever the necessity or desirability therefor may occur, and whether or not the same shall occur, in whole or in part, by wear, tear, obsolescence or defects, and shall use all reasonable precautions to prevent waste, damage or injury, except as provided hereinafter.

LANDLORD and not TENANT, shall be responsible for and shall promptly correct any defects in the building on the Premises which are due to faulty design, or to errors of construction not apparent at the time the Premises were inspected by TENANT for purposes of occupancy by TENANT; this shall not be interpreted to relieve TENANT of any responsibility or liability herein otherwise provided, including among others, for structural failure due to the fault or negligence of TENANT.

TENANT shall also, at TENANT'S own cost and expense, maintain the landsite in thoroughly clean condition; free from solid waste (which includes liquid and gaseous as defined by the Resource Conservation and Recovery Act), rubbish, garbage and other obstructions. Specifically, TENANT shall not use said landsite, nor permit it to be used, as a deposit or as dump for raw materials, waste materials, hazardous, toxic or non-toxic substances, or substances of whichever nature. TENANT shall neither make any excavation for the purpose of storing, putting away and/or concealing raw materials or waste materials of any kind. Underground storage of hazardous and/or toxic substances is specifically prohibited.

TENANT shall not do or cause to be done, nor permit on the Premises anything deemed extra hazardous, nor shall it store in the Premises flammable or toxic products or any class or kind without taking the proper precautions and complying with applicable laws and regulations.

In case TENANT needs to store in the landsite raw materials of a hazardous and/or toxic nature or hazardous and/or toxic wastes, TENANT shall notify LANDLORD and secure its prior authorization. LANDLORD shall be furnished with a copy of any permit issued for such storage.

Although it is not intended that TENANT shall be responsible for any decrease in value of the Premises due to the mere passing of time, or for ordinary wear and tear of surfaces and other structural members of the building, nevertheless TENANT shall: (i) replace, with

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like kind and quality, doors, windows; electrical, sanitary and plumbing, fixtures; building equipment and/or other facilities or fixtures in the Premises which through TENANT'S use, fault or negligence, become too worn out to repair during the life of this Lease, (ii) paint the property inside and outside as required.

In addition to the foregoing, TENANT shall indemnify and hold LANDLORD harmless from and against any and all cost, expenses, claims, losses, damages, or penalties, including counsel fees, because of or due to TENANT'S failure to comply with the foregoing, and TENANT shall not call upon LANDLORD for any disbursement or outlay of money whatsoever, and hereby expressly releases and discharges LANDLORD of and from any liability or responsibility whatsoever in connection therewith.

THIRTEEN: Roof Care - TENANT, without the prior consent of LANDLORD, shall not: (i) erect or cause to be erected on the roof any bill board, aerial, sign, or structure of any kind, (ii) place any fixture, equipment or any other load over the roof, (iii) drill any hole on the roof for whichever purpose, (iv) use the roof for storage, nor (v) correct any leaks whatsoever, this being LANDLORD'S sole responsibility. Furthermore, TENANT shall take all reasonable precautions to insure that the drainage facilities of the roof are not clogged and are in good and operable conditions at all times.

FOURTEEN: Floor Loads - TENANT hereby acknowledges that it has been informed by LANDLORD that the maximum floor load of the Premises herein demised is 150 pounds per sq. ft. Therefore, TENANT hereby agrees that in the event the load of the machinery and equipment to be installed thereat exceeds such maximum load, it shall, at its own cost and expense, carry out any improvements to the floor of the Premises which may be necessary to support such additional load; it being further agreed and understood that construction and/or installation of such improvements shall not be commenced until after LANDLORD'S approval of the plans to be prepared therefor by TENANT and thereafter, after completion of construction and/or installation of said facilities, they shall be deemed covered by and subject to the applicable provisions of this Contract; it being further specifically agreed and understood that upon termination of this Lease, such facilities shall be removed by TENANT, at its own cost and expense, or in the alternative, and upon request by LANDLORD, they shall remain as part of the Premises with no right whatsoever on the part of TENANT to be reimbursed and/or compensated therefor.

FIFTEEN: Fixtures - TENANT shall not affix to the ceiling, nor to its supporting joists or columns, nor to any of its walls, any air conditioning unit, nor any other fixture, without the prior consent of LANDLORD *(1)

SIXTEEN: .Environmental Protection and Compliance - TENANT agrees, as a condition hereof, that it will not discharge its solid, *(1) except for fixtures or air conditioning units previously installed at present on the property.

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liquid or gaseous industrial and/or sanitary effluent or discharges, either into the sewer system and/or into any other place until after required authorization therefor has been obtained from the Puerto Rico Aqueduct and Sewer Authority, and/or the Department of Health of Puerto Rico and/or Environmental Quality Board, and/or any other governmental agency having jurisdiction thereof and TENANT further agrees and undertakes to treat any such effluent, prior to discharge thereof as required by the said Authority, Department, and/or governmental agency with jurisdiction, and/or to install any equipment or system required, and to fully abide by and comply with any and all requisites imposed thereby, and upon request by LANDLORD to submit evidence of such compliance; it being agreed that non-compliance thereof by TENANT for a period of ninety (90) days after notice, shall be deemed an additional event of default under the provisions hereof. Provided, that no construction and/or installation shall be made until LANDLORD has approved of it.

TENANT shall also, at TENANT'S own cost and expense, construct and maintain the Premises, processes and/or operating procedures in compliance with the terms, conditions and commitments specified in any Environmental Impact Statement, Environmental Assessment or any other analogous document produced by the Commonwealth of Puerto Rico Economic Development Administration/LANDLORD as lead agency/ or by any other governmental agency in connection with the approval of the project.

TENANT shall also serve LANDLORD with a copy of any lawsuit, notice of violation, order to show cause or any other regulatory or legal action against TENANT in any environmentally-related case or issue.

TENANT shall also serve LANDLORD with a copy of any permit granted to TENANT for air emissions, water discharge, solid waste generation, storage, treatment and/or disposal, and for any hazardous and/or toxic waste raw materials or by-products used or generated, stored, treated and/or disposed.

TENANT shall also serve LANDLORD with a copy of any filing or notification to be filed by TENANT with any regulatory agency or any environmentally related case or issue, specially in any situation involving underground or surface water pollution, hazardous and/or toxic waste spillage and ground contamination. The notification to LANDLORD shall take place not later than the actual filing of the pertinent documents with the regulatory agency.

SEVENTEEN: Improper Use - TENANT, during the term of this Lease and of any renewal or extension thereof, agrees not to use or keep or allow the leased Premises or any portion thereof to be used or occupied for any unlawful purpose or in violation of this Lease or of any certificate of occupancy or certificate of compliance covering or affecting the use of the Premises or any portion thereof, and will not

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suffer any act to be done or any condition to exist on the Premises or any portion thereof, or any article to be brought thereon, which may be dangerous, unless safeguarded as required by law, or which may in law, constitute a nuisance, public or private, or which may make void or voidable any insurance then in force on the Leased Premises.

EIGHTEEN: Government Regulations - TENANT agrees and undertakes to abide by and comply with any and all rules, regulations and requisites of the Planning Board of Puerto Rico, the Department of Health, the Environmental Quality Board, the Environmental Protection Agency (EPA), where applicable and/or of any other governmental agency, having jurisdiction thereon applicable to TENANT'S operations at the Premises and/or products to be manufactured thereat, and if requested by LANDLORD, TENANT shall submit evidence of such compliance; it being agreed and understood that noncompliance with any and all such rules, regulations and requisites shall be deemed an additional event of default under the provisions of this Contract, unless remedied within thirty (30) days after receipt of notice thereof.

Any and all improvements to the Premises required by any governmental agency, having jurisdiction thereon so as to perform TENANT'S operations in accordance with the regulations and requisites thereof, shall be at TENANT'S own cost and expense, except for any improvements that may be required as a result of any violation by LANDLORD that may exist at the effective date hereof other than violations caused by TENANT or TENANT'S agents.

TENANT further agrees and undertakes to install in the Premises, at its own cost and expense, such devices as may be necessary to prevent that any hazard, which may be caused or created by its operations may affect the environmental integrity of the landsite or may affect or cause any nuisance to adjacent tenants and/or the community in general; it being agreed and understood that creating or causing any such nuisance, shall be deemed an additional event of default under the provisions of this Contract.

TENANT further agrees and undertakes to abide by and comply with any and all rules, regulations and requisites of the Fire Department relative to the use and storage of raw materials, finished products and/or inflammable materials, and/or of any other governmental agency, having jurisdiction thereon, applicable to TENANT'S operations at the Premises, and if requested by LANDLORD, shall submit evidence of such compliance; it being agreed and understood that noncompliance by TENANT with any of the aforementioned rules, regulations and requisites shall be deemed, in each of such cases, an additional event of default under the provisions of this Contract unless remedied within thirty (30) days after receipt of notice thereof.

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If as a consequence of the foregoing provisions, TENANT needs to make alterations to the Premises, the same shall be done subject to the provisions of Article TEN thereof.

NINETEEN: Use Permit - TENANT agrees to abide by and comply with any and all conditions and requisites included in the Use Permit which may be issued by the Puerto Rico Permits and Regulations Administration (ARPE), and, if requested by LANDLORD, shall submit evidence of such compliance; it being agreed and understood that noncompliance by TENANT with any and all such conditions and requisites and/or the cancellation of the said Use Permit shall, in each of such cases, be deemed an additional event of default under the provisions of this Contract.

TWENTY: Inspection - TENANT shall permit LANDLORD or LANDLORD'S agents to enter the Premises at all reasonable times for the purpose of inspecting the same, or of making repairs that TENANT has neglected or refused to make as required by the terms, covenants and conditions of this Lease, and also for the purpose of showing the Premises to persons wishing to purchase the same, and during the year next preceding the expiration of this Lease, shall permit inspection thereof by or on behalf of prospective tenants. If, at a reasonable time, admission to the Premises for the purposes aforesaid cannot be obtained, or if at any time an entry shall be deemed necessary for the inspection or protection of the property, or for making any repairs, whether for the benefit of TENANT or LANDLORD, LANDLORD'S agents or representatives may enter the Premises by force, or otherwise, without rendering LANDLORD, or LANDLORD'S agents or representatives liable to any claim or cause of action or damage by reason thereof, and accomplish such purpose.

The provisions contained in this Article are not to be construed as an increase of LANDLORD'S obligations under this Lease; it being expressly agreed that the right and authority hereby reserved does not impose, nor does LANDLORD assume, by reason thereof, any responsibility or liability whatsoever for the repair, care or supervision of the Premises, or any building, equipment or appurtenance on the Premises.

TWENTY ONE: LANDLORD'S entry for repairs and alterations - LANDLORD reserves the right to make such repairs, changes alterations, additions or improvements in or to any portion of the building and the fixtures and equipment which are reputed part thereof as it may deem necessary or desirable and for the purpose of making the same, to use the street entrances, halls, stairs and elevators of the building provided that there be no unnecessary obstruction of TENANT'S right of entry to and peaceful enjoyment of the Premises, and TENANT shall make no claim for rent abatement compensation or damages against LANDLORD by reason of any inconvenience or annoyance arising therefrom.

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TWENTY TWO: LANDLORD excused in certain instances - If, by reason of inability to obtain and utilize labor, materials or supplies, or by reason of circumstances directly or indirectly the result of any state of war, or of emergency duly proclaimed by the corresponding governmental authority, or by reason of any laws, rules orders, regulations or requirements of any governmental authority now or hereafter in force or by reason of strikes or riots, or by reason of accidents, in damage to or the making of repairs, replacements or improvements to the building or any of the equipment thereof, or by reason of any other cause reasonable beyond the control of LANDLORD, LANDLORD shall be unable to perform or shall be delayed in the performance of any covenant to supply any service, such non-performance or delay in performance shall not be grounds for any claim against LANDLORD for damages or constitute a total or partial eviction, constructive or otherwise. It being agreed and understood that the time for completion of any such construction, shall be extended for a period of time equal to the number of days of any such delay.

TWENTY THREE: Quiet Enjoyment - TENANT on paying the full rent and keeping and performing the conditions and covenants herein contained, shall and may peaceably and quietly enjoy the Premises for the term aforesaid, subject, however, to the terms of this Lease and to the mortgages hereinafter mentioned.

TWENTY FOUR: Leasehold Improvements - If leasehold improvements made by or for the benefit of TENANT in the Premises at its request or other personal property of TENANT are assessable or taxable and a tax liability is imposed to TENANT or LANDLORD, it is understood that it shall be the sole responsibility of TENANT to pay such taxes and in no event shall such taxes be the liability of or be transferable to LANDLORD. In the event that by operation of law, such taxes became a liability of LANDLORD, TENANT shall pay such taxes as they become due and payable and shall promptly reimburse LANDLORD for any payments or expenses incurred or disbursed by LANDLORD by reasons of any such assessment. Said amount shall be due and payable, as additional rent, with the next installment of rent. In the event that TENANT fails to make this payment when due, it shall be subject to the provisions of Article THIRTY SEVEN hereof.

TWENTY FIVE: Stoppage of Operations - It is understood by the parties hereto that this Lease is made by LANDLORD in furtherance of the industrialization plans of the Commonwealth of Puerto Rico, and it is accordingly understood that TENANT will use all reasonable efforts while this Lease is in effect to maintain a manufacturing operation upon the Premises, but nothing contained in this paragraph shall be deemed to require TENANT to maintain such an operation otherwise than in accordance with sound principles of business management, or (without limiting the generality of the foregoing) to prevent TENANT

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from curtailing such operation or from shutting it down, whenever and as often as TENANT may, in the exercise of sound business judgment, deem such action advisable. However, TENANT shall give to LANDLORD notice of any necessary or convenient curtailment and/or shut-down, at least seven (7) days prior to the date fixed therefor except in cases of an emergency shut-down, in which case such notice shall be given at the earliest possible time. No curtailment of operations or shut-down in accordance with the provisions of this paragraph shall constitute a default under the provisions of this Contract which will enable LANDLORD to terminate it, unless such plants shall have been shut-down for a period of six (6) consecutive months. A shut-down on account of unforeseeable event or events which although foreseeable could not be prevented, shall not constitute a breach of this agreement. Nothing in this paragraph contained shall relieve TENANT from the payment of rent during the period of any shut-down or curtailments of operations.

TWENTY SIX: Assignment and Subletting - TENANT shall not assign, this Lease nor let or sublet the Premises or any part thereof except to its parent company, to a wholly owned subsidiary, to an affiliate of TENANT, wholly owned by TENANT'S parent company or to a corporation to be organized by TENANT. In any of these cases, TENANT shall promptly notify LANDLORD of said assignment or subletting, it being agreed and understood that no such assignment or subletting shall: (i) reduce or, in any way, affect the obligations of TENANT under this Lease, nor (ii) release TENANT from liability under this Lease.

TWENTY SEVEN: Successors in Interest - This Lease Contract and every provision thereof, shall bind and inure to the benefit of the legal representatives, successors and assigns of the parties. However, the term "LANDLORD", as used in this Contract, so far as any covenants or obligations on the part of LANDLORD under this Lease are concerned, shall be limited to mean and include only the owner or lessor, at the time in question, of the Premises, so that in the event hereafter of a transfer of the title to the Premises, whether any such transfer be voluntary or by operation of law or otherwise, the person, natural or juridical, by whom any such transfer is made, shall be and hereby is entirely freed and relieved of all personal liability as respects the performance of the covenants and obligations of LANDLORD under this Lease from and after the date of such transfer.

TWENTY EIGHT: No Representation by LANDLORD - LANDLORD, LANDLORD'S agents or employees, or the agents, executives or employees of the Economic Development Administration, have made no representations or promises with respect to the Premises except as herein expressly set forth and no rights, easements or licenses are acquired by TENANT by implication or otherwise except as expressly set forth in the provisions of this Contract. The taking possession of the Premises by TENANT, shall be conclusive evidence, as against TENANT, that TENANT accepts same "AS IS" and that said Premises,

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particularly the building which forms a part of the same, were in good and satisfactory condition at the time such possession was so taken.

TWENTY NINE: Damages - LANDLORD shall not be responsible for any latent defect or change of conditions in the Premises resulting in damage to the same, or the property or person therein, except to the extent of LANDLORD'S gross negligence, and provided such claims or loss is not covered by insurance herein required from TENANT. TENANT shall promptly notify LANDLORD of any damage to or defects in the premises, particularly in any part of the building's sanitary, electrical, air conditioning or other systems located in or passing through the Premises, and the damage or defective conditions, subject to the provisions of Article TWENTY ONE hereof, shall be remedied by LANDLORD with reasonable diligence.

THIRTY: General Liability Insurance - TENANT shall indemnify, hold harmless and defend LANDLORD and agents, servants and employees of LANDLORD against and from any and all liability, fines, suits, claims, demands, expenses, including attorneys' fees, and actions of any kind or nature arising by reason of injury to person or property including the loss of use resulting thereof or, violation of law occurring in the Premises occasioned in whole or in part by any negligent act or omission on the part of TENANT or an employee (whether or not acting within the scope of his employment), servant, agent, licensee, visitor, assignor or undertenant of TENANT, or by any neglectful use or occupancy of the Premises or any breach, violation or non-performance of any covenant in this Lease on the part of TENANT to be observed or performed.

Pursuant to the foregoing, TENANT shall, maintain during the term of this Lease, at its own cost and expense, a comprehensive General Liability Policy. Said policy shall: (i) be for a combined single limit of no less than \$500,000.00 per accident, (ii) hold LANDLORD harmless against any and all liability as hereinbefore stated, and (iii) the care, custody & control exclusion shall be deleted from this coverage. LANDLORD may require additional reasonable limits of public liability insurance and coverages, when changing circumstances so require.

THIRTY ONE: Property Insurance - TENANT recognizes that the rent provided for herein does not include any element to indemnify, repair, replace or make whole TENANT, his employees, servants, agents, licensees, visitors, assignees, or undertenant for any loss or damage to any property or injury to any person in the Premises.

Accordingly, during the term of this Lease, TENANT shall keep the building standing upon the Premises at the commencement of the term hereof or thereafter erected upon the Premises, including all equipment appurtenant to the Premises and all alterations, changes, additions and improvements, insured for the benefit of LANDLORD and TENANT, as their respective interests may appear, in an amount at

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least equal to the percentages stated below (as LANDLORD may from time to time determine). The basis of the Property Insurance shall be Replacement Cost and the coverage an "All Risks" Property Insurance Policy. Coverages included in the All Risks Form:

1. Fire - "Building & Contents Form"

- (a) Building - 100% of insurable value exclusive of foundations
 - (b) Contents - All equipment appurtenant to the Premises (State value of Policy)
2. Additional Coverages under the Fire Policy
- (a) Extended Coverage Endorsement - 100% of insurable value exclusive of foundations
 - (b) Earthquake - 50% of insurable value including foundations
 - (c) Vandalism and Malicious Mischief Endorsement
 - (d) Improvements and Betterments - For all

- alterations, changes, additions and improvements
3. Landsite and Flood whenever applicable and/or necessary
4. Boiler and Machinery (if any) - 100% of insurable value
5. Pollution Liability Policy - if necessary.

THIRTY TWO: Multifactory Building Specific Provisions - In the event that the Premises constitute a section or sections of an industrial building and landsite in which other operations are conducted by other TENANTS: (i) the insurance coverage herein required, shall be acquired by LANDLORD for the whole of the industrial building and TENANT shall reimburse LANDLORD, for its proportionate share in the total cost of said policies, (ii) if, because of anything done, caused or permitted to be done, permitted or omitted by TENANT, the premium rate for any kind of insurance affecting the Premises shall be increased, TENANT shall pay to LANDLORD the additional amount which LANDLORD may be thereby obligated to pay for such insurance, and if LANDLORD shall demand that TENANT remedy the conditions which caused the increase in the insurance premiums rate, TENANT will remedy such conditions within five (5) days after such demand, and (iii) the insurance policies required in the preceding Articles 30- & 31 shall be endorsed to include a waiver of subrogation against TENANT. All amounts to be reimbursed by TENANT under this Article, shall be due and payable, as additional rent, with the next installment of rent. In the event that TENANT fails to make this payment, when due, it shall be subject to the provisions of Article THIRTY SEVEN hereof.

THIRTY THREE: Additional Insurance Provisions - All the insurance policies herein required from TENANT, shall be taken in form and substance acceptable to LANDLORD with Insurance Companies duly authorized to do business in Puerto Rico, having an "A" and/or a higher financial rating according to Best's Insurance Report; and

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shall include LANDLORD as an additional insured. TENANT shall instruct the corresponding insurer to deliver such policies or certified copies or Certificates of Insurance, in lieu thereof, directly to LANDLORD. LANDLORD reserves the right not to deliver possession of the Premises to TENANT, unless, and until two (2) days after such original policies, or certified copies or certificates have been deposited with LANDLORD.

Furthermore, said policies, shall: (i) provide that they may not be cancelled by the insurer for nonpayment of premium or otherwise, until at least thirty (30) days after service of notice by registered or certified mail of the proposed cancellation upon LANDLORD, and (ii) be promptly renewed by TENANT upon expiration and TENANT shall, within thirty (30) days after such renewal, deliver to LANDLORD adequate evidence of the payment of premiums thereon. If such premiums or any of them shall not be so paid, LANDLORD may procure the same in the manner set forth for governmental agencies, and TENANT shall reimburse LANDLORD any amount so paid. This reimbursement shall be due and payable with the next installment of rent. In the event that TENANT fails to make this payment when due, it shall be subject to the provisions of Article THIRTY SEVEN hereof. It is expressly agreed and understood, that payment by LANDLORD of any such premiums shall not be deemed to waive or release the default in the payment thereof by TENANT nor the right of LANDLORD to take such action as may be available hereunder as in the case of default in the payment of rent.

Upon the commencement of the term hereof, TENANT shall pay to LANDLORD the apportioned unearned premiums on all such policies of insurance then carried by LANDLORD in respect of the Premises in the event TENANT continues with the insurance policies placed in LANDLORD.

TENANT shall not violate nor permit to be violated any of the conditions or provisions of any of said policies, and TENANT shall so perform and satisfy the requirements of the companies writing such policies that at all times companies of good standing and acceptable to LANDLORD shall be willing to write and continue such insurance.

TENANT shall cooperate with LANDLORD in connection with the collection of any insurance monies that may be due in the event of loss and shall execute and deliver to LANDLORD such proofs of loss and other instruments that may be required for the purpose of facilitating the recovery of any such insurance monies, and in the event that TENANT shall fail or neglect so to cooperate or to execute, acknowledge and deliver any such instrument, LANDLORD, in addition to any other remedies, may as the agent or attorney-in fact of TENANT, execute and deliver any proof of loss or any other instruments as may seem desirable to LANDLORD and any mortgagee for the collection of such insurance monies. This shall not be interpreted as any waiver of the obligations of TENANT under Articles THIRTY, THIRTY ONE, THIRTY

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the and THIRTY THREE hereof or exclusively in favor of LANDLORD under Article THIRTY NINE hereof.

THIRTY FOUR: Waivers - The receipt by LANDLORD of the rent, additional rent, or any other sum or charges payable by TENANT with or without knowledge of the breach of any covenant of this Contract, shall not be deemed a waiver of such breach. No act or omission of LANDLORD or its agent during the term of this Lease shall be deemed an acceptance of a surrender of the Premises and no agreement to accept a surrender of the Premises shall be valid unless it be made in writing and subscribed by LANDLORD. This Contract contains all the agreements and conditions made between the parties hereto with respect to the premises and it cannot be changed orally. Any additions to, or charges in this Lease must be in writing, signed by the party to be charged.

Failure on the part of LANDLORD to act or complain of any action or nonaction on the part of TENANT shall not be deemed to be a waiver of any of its respective rights hereunder nor constitute a waiver at any subsequent time of the same provision. The consent or approval by LANDLORD to, or of any action by TENANT requiring consent or approval, shall not be deemed to waive or render unnecessary the consent or approval by LANDLORD of any subsequent similar act.

THIRTY FIVE: Reinstatement - No receipt of monies by LANDLORD for TENANT after the termination or cancellation hereof in any lawful manner shall reinstate, continue or extend the term hereof, or affect any notice theretofore given to TENANT, or operate as a waiver of the right of LANDLORD to enforce the payment of rent, additional rent, or other charges then due or thereafter falling due, or operate as a waiver of the right of LANDLORD to recover possession of the Premises by proper suit, action, proceeding or remedy; it being agreed that, after the service of notice to terminate or cancel this Lease, and the expiration of the time therein specified, if the default has not been cured in the meantime, or after the commencement of suit, action or summary proceedings or of any other remedy, or after a final order, warrant of judgment of the possession of the Premises, LANDLORD may demand, receive and collect any monies then due, or thereafter becoming due, without in any manner affecting such notice, proceeding, suite, action, order, warrant or judgment; and any and all such monies so collected shall be deemed to be payments for the use and occupation of the Premises, or at the election of LANDLORD, on account of TENANT'S liability hereunder. Delivery or acceptance of the keys to the Premises, or any similar act, by the LANDLORD, or its agents or employees, during the term hereof, shall not be deemed to be a delivery or an acceptance of a surrender of the Premises unless LANDLORD shall explicitly consent to it, in the manner set forth hereinbefore.

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THIRTY SIX: Subordination and Attornment - This Lease is and shall be subject and subordinate to all liens, or mortgages which may now or hereafter affect the Premises and to all renewals, modifications, consolidations, replacements and extensions thereof and, although this subordination provision shall be deemed for all purposes to be automatic and effective without any further instrument on the part of TENANT, TENANT shall execute any further instrument requested by the LANDLORD to confirm such subordination.

TENANT further covenants and agrees that if by reason of a default upon the part of the LANDLORD of any mortgage affecting the Premises, the mortgage is terminated or foreclosed by summary proceedings or otherwise, TENANT will attorn to the mortgage or the purchaser in foreclosure proceedings, as the case may be, and will recognize such mortgage or purchaser, as the TENANT'S landlord under this Lease. TENANT agrees to execute and deliver, at any time and from time to time, upon the request of LANDLORD or of the mortgagee or the purchaser in foreclosure proceedings, as the case may be, any reasonable instrument which may be necessary or appropriate to evidence such attornment. TENANT further waives the provision of any statute or rule of law now or hereafter in effect which may give or purport to give TENANT any right of election to terminate this lease or to surrender possession of the Premises demised hereby in the event any such proceeding is brought by the holder of any such mortgage, and TENANT'S obligations hereunder shall not be affected in any way whatsoever by any such proceeding.

TENANT, covenants and agrees, upon demand of the holder of any mortgage duly recorded or recordable in the corresponding Registry of the Property or of any receiver duly appointed by the foreclose of any such mortgage, to pay to the holder of any such mortgage or to such receiver, as the case may be, all rent becoming due under this Lease after such demand, provided such holder of any such mortgage or any such receiver complies with the obligations of LANDLORD under this Lease.

TENANT, upon request of LANDLORD or any holder of any mortgage or lien affecting the Premises, shall from time to time, deliver or cause to be delivered to LANDLORD or such lien holder or mortgagee, within ten (10) working days from date of demand a certificate duly executed and acknowledged in form for recording, without charges, certifying, if true, or to extent true, that this Lease is valid and subsisting and in full force and effect and LANDLORD is not in default under any of the terms of this Lease.

THIRTY SEVEN: Late Payments and Payment by LANDLORD - In the event that: (i) TENANT makes late payment, or fails to make payment to LANDLORD, in whole or in part, of the rent, or of the additional rent, or of any of the other payments of money required to be paid by TENANT to LANDLORD, as stipulated in this Lease, when and as due and

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regalle; or if (ii) LANDLORD, without assuming any obligation to do so, after any notice or grace period provided hereunder, performs or causes to be performed, at the cost and expense of TENANT, any of the acts or obligations agreed to be performed by TENANT, as stipulated in this Lease, and TENANT fails to refund to LANDLORD any amounts of money paid or incurred by LANDLORD in performing or causing the performance of such acts or obligations, when and as due and payable, TENANT undertakes and agrees to pay LANDLORD as additional rent, interest on such late paid or unpaid rents, additional rent, and/or on such other payments of money required to be paid, and/or on any such amounts of money required to be refunded, from and after the date when payment thereof matured or became due and payable, until full payment, at the rate of twelve per cent (12%) per annum, or if such 12% interest, is unlawful, then and in such event, at the highest maximum prevailing rate of interest on commercial unsecured loans as fixed by the Board of Regulatory Rates of Interest and Financial Charges, created under Law #I, approved October 15, 1973 (10 LPRA 998), as amended, or by any successor statute or regulation thereof.

THIRTY EIGHT: Abatement - If any substantial service or facility to be provided by LANDLORD is unavailable for a period exceeding thirty (30) days and LANDLORD has been notified of the same, should time unavailability of such service render all or any portion of the Premises untenable, TENANT after the aforesaid thirty (30) days, shall be entitled to an abatement of a portion of the rent that shall reflect that portion of the Premises which is untenable, provided the damage to the service or facility is not attributable to the act or neglect of TENANT or the employees, servants, licensees, visitors, assigns or undertenants of TENANT.

THIRTY NINE: Fire or other Casualty - If before or during the term of this Lease, the Premises shall be damaged by fire or other casualty, LANDLORD after written notice thereof is given by TENANT, shall repair the same with reasonable dispatch after notice to it of the damage, due allowances being made for any delay due to causes beyond the LANDLORD'S reasonable control, provided, however, that LANDLORD shall not be required to repair or replace any furniture, furnishings or other personal property which TENANT may have placed or installed or which it may be entitled or required to remove from the Premises. LANDLORD shall proceed with due diligence to obtain the corresponding insurance adjustment of the loss and TENANT shall fully cooperate with LANDLORD and assist in the adjustment of the loss. Until such repairs are completed, and provided such damage or other casualty is not attributable to the act or neglect of TENANT or the employees, servants, licensees, visitors, assigns or undertenants of TENANT, the rent required to be paid pursuant to Article FOUR hereof, shall be abated in proportion to the part of the Premises which are untenable. If the building, be so damaged that LANDLORD shall decide

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to demolish and/or to reconstruct the building, in whole or in part, LANDLORD may terminate this Lease by notifying TENANT within a reasonable time after such damage of LANDLORD'S election to terminate this Lease, such termination to be effective immediately if the term shall not have commenced or on a date to be specified in such notice if given during the term. In the event of the giving of such notice during the term of this Lease, the rent shall be apportioned and paid up to the time of such fire or other casualty if the Premises are damaged, or up to the specified date of termination if the Premises are not damaged and LANDLORD shall not be otherwise liable to TENANT for the value of the unexpired term of this Lease.

FORTY: Default Provisions - If, during the term of this Lease, TENANT shall: (i) apply for or consent in writing to, the appointment of a receiver, trustee or liquidator of TENANT or of all or substantially all of its assets or (ii) seek relief under the Bankruptcy Act, or admit in writing its inability to pay its debts as they become due, or (iii) made a general assignment for the benefit of its creditors, or (iv) file a petition, case or an answer seeking relief (other than a reorganization not involving the liabilities of TENANT) or arrangement with creditors, or take advantage of any insolvency law, or (v) file an answer admitting the material allegations of a case filed against it in any bankruptcy, reorganization or insolvency proceeding or, if an order, judgment or decree shall be entered by any court of competent jurisdiction on the application of TENANT or creditor adjudicating TENANT a bankrupt or insolvent, or approving a petition seeking reorganization of TENANT (other than a reorganization not involving the liabilities of TENANT) or appointment of a receiver, trustee or liquidator of TENANT, or of all or substantially all its assets, and such order, judgment or decree, shall continue unstayed and in effect for a period of sixty (60) consecutive days, the term of this Lease and all right, title and interest of TENANT hereunder shall expire as fully and completely as if that day were the date herein specifically fixed for the expiration of the term, and TENANT will then, quit and surrender the Premises to LANDLORD, but TENANT shall remain liable as hereinafter provided.

If, during the term of this Lease: (i) TENANT shall default in fulfilling any of the covenants of this Lease (other than the covenants for the payment of rent or additional rent), or of any other standing contract with LANDLORD or (ii) if, during the term of this Lease TENANT shall abandon, vacate, or remove from the Premises the major portion of the goods, wares, equipment, or furnishings usually kept on said premises, or (iii) this Lease, without the prior consent of LANDLORD, shall be encumbered, assigned or transferred in any manner in whole or in part or shall, by operation of law, pass to or devolve upon any third party, except as herein provided, or (iv) if TENANT is in violation of laws, rules and regulations regarding

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minimum wages of its employees, or of any other law, rules and regulations applicable to his operations, but which have not been specifically mentioned in this Lease, LANDLORD may give to TENANT notice of any such default or the happening of any event referred to above and if at the expiration of thirty (30) days after the service of such a notice the default or event upon which said notice was based shall continue to exist, or in the case of a default which cannot with due diligence be cured within a period of thirty (30) days, if TENANT fails to proceed promptly after the service of such notice and with all due diligence to cure the same and thereafter to prosecute the curing of such default with all due diligence (it being intended that in connection with a default not susceptible of being cured with due diligence within thirty (30) days that the time of TENANT within which to cure the same shall be extended for such period as may be necessary to complete the same with all due diligence), LANDLORD may give to TENANT a notice of expiration of the term of this Lease as of the date of the service of such second notice, and upon the giving of said notice of expiration the term of this Lease and all right, title and interest of TENANT hereunder shall expire as fully and completely as if that day were the date herein specifically fixed for the expiration of the term, and TENANT or any party holding under its will then quit and surrender the Premises to LANDLORD, but TENANT shall remain liable as hereinafter provided.

If, (i) TENANT shall default in the payment of the rent, the additional rent, or of any other payment as required under this Lease and such default shall continue for ten (10) working days after notice thereof by LANDLORD, or (ii) if the default of the payment of the rent, continues for thirty (30) days from the date any such payment became due and payable (AUTOMATIC DEFAULT TERMINATION), or (iii) if this Lease shall terminate as in the first and second paragraphs of this Article provided, this Lease shall terminate and TENANT will then quit and surrender the Premises to LANDLORD, but TENANT shall remain liable as hereinafter provided, LANDLORD or LANDLORD'S agents and servants may immediately or at any time thereafter re-enter the Premises and remove all persons and all or any property therefrom, whether by summary eviction proceedings or by any suitable action or proceeding at law, or with the license and permission of TENANT, which shall under this Contract be deemed given upon expiration of the strict thirty (30) day notice period recited in the second paragraph of this Article, without LANDLORD being liable to indictment, prosecution or damages therefor and repossess and enjoy the Premises with all additions, alterations and improvements.

If TENANT shall fail to take possession of the Premises within ten (10) days after the commencement of the term of this Lease, or if TENANT shall vacate and abandon the Premises, LANDLORD shall have the right, at LANDLORD'S option, to terminate this Lease and the

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term hereof, as well as all the right, title and interest of TENANT hereunder, by giving TENANT five (5) days notice in writing of such intention, and upon the expiration of the time fixed in such latter notice, if such default be not cured prior thereto, this Lease and the term hereof, as well as all the right, title and interest of TENANT hereunder, shall wholly cease and expire in the same manner and with the same force and effect (except as to TENANT'S liability) as if the date fixed by such latter notice were the expiration of the term herein originally granted; and TENANT shall immediately quit and surrender to LANDLORD the Premises and each and every part thereof and LANDLORD may enter into or repossess the Premises, either by force, summary proceedings or otherwise. The right granted to LANDLORD in this Article or any other Article of this Lease to terminate this Lease, shall apply to any extension or renewal of the term hereby granted, and the exercise of any such right by LANDLORD during the term hereby granted, shall terminate any extension or renewal of the term hereby granted and any right on the part of TENANT thereto.

Upon the termination of this Lease by reason of any of the foregoing events, or in the event of the termination of this Lease by summary eviction proceedings or under any provisions of law, now or at any time hereafter, in force by reason of, or based upon, or arising out of a default under or breach of this Lease on the part of TENANT, or upon LANDLORD recovering possession of the Premises in the manner or in any of the circumstances hereinbefore mentioned, or in any other manner or circumstances whatsoever, whether with or without legal proceedings, by reason of, or based upon, or arising out of a default under or breach of this Lease on the part of TENANT, LANDLORD, at its option, but without assuming any obligation to do so in any case, may at any time, and from time to time, relet the Premises or any part or parts thereof for the account of TENANT or otherwise on such terms as LANDLORD may elect, including the granting of concessions, and receive and collect the rents therefor, applying the same at a rental not higher than the one stipulated in this Contract, first to the payment of such reasonable expenses as LANDLORD may have incurred in recovering possession of the Premises, including reasonable legal expenses, and for putting the same into good order or condition or preparing or altering the same for re-rental, and expenses, commissions and charges paid, assumed, or incurred by LANDLORD in and about the reletting of the Premises or any portion thereof and then to the fulfillment of the covenants of TENANT hereunder. Any such reletting herein provided for, may be for the remainder of the term of this Lease or for a longer or shorter period or at a higher or lower rental. In any such case, whether or not, the Premises or any part thereof be relet, TENANT shall pay to LANDLORD the rent required to be paid by TENANT up to the time of such termination of this Lease, and/or the full rent provided for in the agreement for any holdover of

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each period after termination and up to the surrender or recovery of possession of the Premises by LANDLORD, as the case may be, and thereafter TENANT covenants and agrees, to pay to LANDLORD until the end of the term of this Lease as originally demised the equivalent of any deficiency amount of all the rent reserved herein, less the net avails of reletting, if any, as specified hereinabove in this Article and the same shall be due and payable by TENANT to LANDLORD as provided herein, that is to say, TENANT shall pay to LANDLORD the amount of any deficiency then existing.

FORTY ONE: LANDLORD'S Remedies - In the event TENANT shall default in the performance of any of the terms, covenants or provisions herein contained, LANDLORD may, but without the obligation to do so, perform the same for the account of TENANT and any amount paid or expense incurred by LANDLORD in the performance of the same shall be repaid by TENANT on demand. In the event of a breach or threatened breach by TENANT or any subtenant or other person holding or claiming under TENANT of any of the covenants, conditions or provisions hereof, LANDLORD shall have the right of injunction to restrain the same, and the right to invoke any remedy allowed by law or in equity as if specific remedies, indemnity or reimbursement were not herein provided for. The rights and remedies given to LANDLORD in this Lease are distinct, separate and cumulative, and no one of them, whether or not exercised by LANDLORD, shall be deemed to be a waiver, or an exclusion of any of the others.

FORTY TWO: Notice of Default - Anything in this Lease to the contrary notwithstanding, it is specifically agreed that there shall be no enforceable default against LANDLORD under any provisions of this Lease, unless notice of such default be given by TENANT to LANDLORD in which TENANT shall specify the default or omission complained of, and LANDLORD shall have thirty (30) days after receipt of such notice in which to remedy such default, or if said default or omission shall be of such a nature that the same cannot be cured within said period, then the same shall not be an enforceable default if LANDLORD shall have commenced taking the necessary steps to cure or remedy said default within said thirty (30) days and diligently proceeds with the correction thereof.

FORTY THREE: Definition of Capitalization - For the purpose of this Contract, specifically of Article SIX, Capitalization means the total of owner's equity sources (preferred stock, common stock and surplus accounts) and long-term debts, it being agreed and understood that the amortization of any such debt shall in no way diminish the amount originally determined and Capitalization.

FORTY FOUR: Disclosure of Information - TENANT agrees to furnish to LANDLORD within ninety (90) days after the expiration of each fiscal year of TENANT, an annual statement certified by an independent

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Certified Public Accountant showing as of the end of each such fiscal year: (i) TENANT'S paid-in capital, (ii) long-term debts and capitalization as required by Articles SIX and FORTY THREE hereof, (iii) investment in machinery and its capacity to provide employment, (iv) taxes (including Social Security taxes) paid, and (v) any other information as required by this Lease.

In the event such statement is not filed with LANDLORD as herein provided, LANDLORD may obtain such information from TENANT at TENANT'S expense, and for such purpose TENANT shall make available to LANDLORD'S designated representatives, its books of accounts and other necessary data and facilities, all of which shall be provided and made available at TENANT'S principal office in Puerto Rico.

FORTY FIVE: Automatic Renewal - In the event TENANT does not vacate the Premises in the manner and under the conditions hereinbefore provided, within ninety (90) days after the normal expiration of the term hereof, LANDLORD shall have the option to be exercised at any time thereafter, to notify TENANT that the lease herein has been renewed for an additional term of ten (10) years from the date of the last normal expiration of the term hereof and, in such event, the parties agree that this Contract shall be held to have been renewed and to continue in full force and effect for such additional term of ten (10) years upon the mere mailing of such notice by LANDLORD to TENANT. This provision shall in no way prejudice, affect or deny any right which LANDLORD may otherwise have because, or at the time, of any such termination of the term hereof, particularly whenever LANDLORD does not exercise such option; it being agreed and understood that such renewal shall be upon the same terms and conditions contained herein except that the rental rate to be charged shall be the rate then currently being charged by LANDLORD for similar building in the area, but in no event shall it be less than the rate herein stipulated.

FORTY SIX: Partial Invalidity and Applicable Law - If any term or provisions of this Lease or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Lease and the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Lease shall be valid and be enforceable to the fullest extent permitted by law. This Contract is entered into and shall be interpreted in accordance with the laws of the Commonwealth of Puerto Rico.

FORTY SEVEN: Lease Termination and Holding Over - Upon the expiration or termination of this Lease: (i) TENANT shall furnish LANDLORD with a full and detailed report as to the environmental integrity of the landsite and Premises with specific reference to each and every environmental area of concern including, but not limited to,

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emissions, effluent discharge, state of underground and surface waters, solid waste and hazardous and/or toxic wastes generation, storage, transportation, treatment and/or disposal, and any hazardous and/or toxic raw materials or by-products used or generated, stored, transported, treated and/or disposed of during the period of operation, state of the landsite, disclosure of any environmental regulatory violations, compliance plans, permits or any other regulatory procedures related to the operation. The report shall be accompanied by a Certification from TENANT as to the environmental state of the premises and landsite. In case there should be any damage or any remedial action to be performed or any other obligation to be fulfilled by TENANT, the Certification shall state so and present a plan of action with the appropriate financial provisions to execute it. LANDLORD shall hold TENANT responsible for any and all environmental damage, or any damage to third parties as a result of any environmental damage, or any remedial action (including monitoring) to be performed at landsite or otherwise as a result of TENANT'S operations after termination of Lease and until such a time as complete remediation or fulfillment of TENANT'S obligations is effected. In case TENANT fails to comply with the foregoing provisions, LANDLORD may elect to effect them at TENANT'S expense and responsibility.

(ii) TENANT shall remove all property of TENANT and that of any third party and failing so to do, TENANT hereby appoints LANDLORD its agent so that LANDLORD may cause all of the said property to be removed at the expense and risk of TENANT. TENANT covenants and agrees to give full and timely observance and compliance to this covenant to remove all its property and surrender the Premises broom clear. TENANT hereby agrees to pay all reasonable necessary cost and expenses thereby incurred by LANDLORD. If, as the sole result of the removal of TENANT'S property any portion of the Additional Premises or of the building of which they are a part, are damaged, TENANT shall pay to LANDLORD the reasonable cost of repairing such damages unless due to the gross negligence of LANDLORD, its agents, servants, employees and contractors. TENANT'S obligation to observe or perform this covenant shall survive the expiration or other termination of the term of this Lease.

FORTY EIGHT: Change of Address - TENANT shall promptly notify LANDLORD of any change in the addresses other than those required from it in Article SEVEN hereof.

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FORTY NINE: The parties hereto acknowledge that Project S-0113-0-52 is in need of certain repairs as detailed in Schedule "B" hereto annexed and made part hereof, which repairs shall be carried out by Tenant subject to the following:

- A. The repair work shall be done in coordination with Landlord's Maintenance Department.
- B. The repair costs and payment to Tenant shall not exceed the amount of \$35,606.00
- C. Upon termination of the repairs and after the inspection and approval of Landlord's Maintenance Department, Landlord hereby agrees that it shall reimburse to Tenant such amount.
- D. Such repairs shall be finalized not later than sixty (60) days from the date of commencement of the term of this lease.

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[Signature]

FIFTY: This rental shall be paid in equal monthly installments, commencing on October 1, 1987 as follows:

<u>TERM</u>	RENT PER SQ. FT. OF GROSS BUILDING AREA <u>PER ANNUM</u>	<u>MONTHLY INSTALLMENTS</u>
1st. year	\$ 1.25	\$ 1,718.20
2nd. year	\$ 1.35	\$ 1,855.66
3rd. to 5th year	\$ 1.60	\$ 2,199.30
6th. to 10th year	\$ 2.00	\$ 2,749.13

FIFTY-ONE: Anything contained in this Contract to the contrary notwithstanding, in the event that TENANT requires additional volume of water and/or pressure as is now available within the area wherein the demised premises are located, is shall be at its own cost and expense the construction and/or installation of such improvements and/or facilities as may be necessary to or convenient and/or required by the Puerto Rico Aqueduct and Sewer Authority to increase such volume and/or pressure; it being agreed and understood, however, that such construction and/or installation shall in no event be commenced until after LANDLORD'S written approval has first been requested and obtained.

FIFTY-TWO: TENANT hereby acknowledges that in the industrial park there are other industries; therefore TENANT hereby specifically agrees and undertakes to take such steps and install such equipment as may be necessary to prevent that any hazard and/or noise which

may be created by its operations may in any way or manner unduly affect the operations of the other industries and therefore TENANT hereby releases and saves LANDLORD harmless from any and all claims or demands arising therefrom or in connection therewith.

FIFTY-THREE: TENANT shall, at its own cost and expense, install a fire protection system and shall obtain the endorsement and approval from the Fire Department for such installation. TENANT must also provide security measures to prevent or reduce fire hazards due to the storage of inflammable materials and products.

FIFTY-FOUR: TENANT shall procure and obtain a permit for the operation of a solid waste emission source from the Environmental Quality Board and authorization from the Office of Solid Waste and/or from the Municipality of San Germán, Puerto Rico for the final disposition of wastes.

FIFTY-FIVE: It is hereby agreed and understood that TENANT shall take the necessary steps to comply with the regulations and law requirements of the Puerto Rico Occupational Safety and Health Office (PROSHO).

FIFTY-SIX: If required by TENANT'S operations, TENANT shall, at its own cost and expense, construct and/or install the necessary equipment to exceed the 50KVA electrical power in conformity with the Puerto Rico Electrical Power Authority and TENANT shall obtain the endorsement and approval of LANDLORD'S Engineering Department.

FIFTY-SEVEN: TENANT, at its own cost and expense, shall implement the necessary measures and install the control equipment to maintain the atmospheric air quality levels in compliance with the environmental laws of the Environmental Quality Board.

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G.P.
<i>[Signature]</i>

INSERT CORPORATION OF P.R.
(INSERTCO) INC

-25-

FIFTY-EIGHT: TENANT agrees to submit to LANDLORD within thirty (30) days from the date of execution of this Contract; (a) evidence of its registration in the Department of State of the Commonwealth of Puerto Rico and the name and address of its resident agent; and (b) a certificate of a resolution of its Board of Directors either authorizing or ratifying the execution of this Contract.

FIFTY-NINE: This Contract is made and entered into subject to and conditioned upon the endorsement and approval of the Planning Department of the Puerto Rico Industrial Development Company, the Office of Economic Studies of the Economic Development Administration and the Environmental Quality Board of Puerto Rico; provided that such approval shall be understood to constitute conditions of this Contract, which if not complied with, shall entitle the LANDLORD to rescind this Contract.

IN WITNESS WHEREOF, LANDLORD AND TENANT have respectively
signed upon proper authority this Lease, this 23rd day of April
1987.

PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY
(LANDLORD)

BY: 

INSERT CORPORATION OF P.R. (INSERTCO) INC
(TENANT)

BY: Alfonso R. P. — President

YEM/nv

INSERT CORPORATION OF P.R.
(INSERTCO) INC

SCHEDULE "A"
- 1 -

DESCRIPTION OF PARCEL OF LAND
(FRONT SECTION OF LOT) LOCATED
AT RETIRO WARD INDUSTRIAL SUBDIVISION,
SAN GERMAN, PUERTO RICO, SITE FOR
PROYECT NO. S-0113-0-52

LANDSITE:

Parcel of land (front section of lot) Located at Retiro
Ward Industrial Subdivision, San Germán, Puerto Rico.

It bounds: by the NORTH, with State Road No. 102; by
the SOUTH; with rear section of lot owned by PRIDCO; by the EAST,
with Street "A" of the same industrial subdivision, and by the
WEST, with Municipal Coliseum.

It has an approximate surface area of 4482.00 square meters,
equivalent to 1.1404 cuerdas.

ENCUMBRANCES:

It is not affected by any rights of way.

DESCRIPTION OF BUILDING LOCATED
AT SAN GERMAN, P.R. (PROJECT NO.
S-0113-0-52)

This is a pitched roof type building consisting of reinforced
concrete foundations, columns, and girders supporting a reinforced
concrete roof slab.

The structure consists of a main floor 140.33' x 100.67' plus
39.50' x 2.33' out to out dimensions with an area of 14,219.00 sq.ft.
of manufacturing space, a lobby 23.50' x 9.00' with an area of
211.00 sq.ft., two lean-tos 28.50' x 21.00 for an area of 1,096.00
sq.ft. to be used for sanitary facilities and two lean-tos 31.25' x
15.60 with an area of 968.76 sq. ft. to be used for stock room and
office facilities. This gives a total area of 16,494.76 sq.ft. of
covered floor space.

The floor consists of a 4 inch thick reinforced concrete floor
slab with an integral cement finish on the manufacturing area stock
room, and stairs, asphalt tiles on the office area; native cement
tiles on the Men's and Ladies' toilet rooms and monolithic cement
finish on the entrance porch.

Exterior walls are of concrete blocks plastered and painted,
except on the front wall which is plastered and painted together
with a stucco finish ornamental wall.

Interior walls at the lean-to are plastered and painted
together with a 5 feet high native cement tile finish wainscoat
at the men's and ladies' toilet rooms.

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<u>C.R.</u>
<u>[Signature]</u>

Ceilings are rubbed and painted throughout the building.

Windows are pivoted steel sash throughout the building except for Miami Aluminum Louvers at the lean-tos.

Doors are wood panel ones, except for one metal and glass, double sliding one at the loading platform.

Clearance in the manufacturing area from finish floor to lowest part of girders is 12'-0" ft. to lowest part of beams.

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Commonwealth of Puerto Rico
PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY
San Juan, Puerto Rico

SCHEDULE "B"

PROJECT ESTIMATES

Computed by: Ing. Miguel A. Arias

Sheet No. 1 of 4

Date: April 21, 1987

Checked by: _____

ESTIMATE FOR: Reparaciones generales

PROJECT NO.: S-0113-0-52 (Insertco Corp) San Germán

ORDER NO.	QUANTITY	UNIT OF MEASURE	I T E M	Unit Price	T O T A L
1		L.S.	Limpieza general de paredes, ventanas plafón y pisos, incluyendo lavado a presión.		\$ 300.00
2		L.S.	Resanado de paredes		175.00
3	1,548	yd. cua.	Pintura interior de paredes, columnas y vigas (dos aplicaciones) Pintura aprobada por CFI	\$ 2.25	3,483.00
4	1,482	yd. cua.	Pintura de plafón (dos aplicaciones)		
5	65	yd. cua.	Pintura aprobada por CFI	2.25	3,334.50
6	33	yd. cua.	Pintura de puertas de metal. Pintura aprobada por CFI	5.00	325.00
7	1	c/u	Pintura de puertas de madera. Pintura aprobada por CFI	5.00	165.00
			Instalar puerta de metal de 6' x 7', ver especificaciones técnicas		
			sección 6-A, incluyendo 'door stops and holders', Yale #823-1/2 - igual o similar	650.00	650.00
8	1	c/u	Instalar cerradura en puerta de metal		
			Yale #8750 with knob BWUS26D or Corbin		
			836US 26D', igual o similar	50.00	50.00
9	1	c/u	Instalar 'Panic-exit device', vertical rod type Sargent No. 9700 & Mortise lock type No. 9900 including coordinator', igual o similar.		
10	5	c/u	Instalar puertas de madera en 'embutia' de 1 3/4", marcos de 'embutia', incluyendo herrajes y aplicación de aceite de linaza, goznes - (3) por puerta de 4" x 4", Stanley 179, igual	500.00	500.00
					500.00
					750.00

Commonwealth of Puerto Rico
PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY
San Juan, Puerto Rico

SCHEDULE "B"

PROJECT ESTIMATES

Computed by: Ing. Miguel A. AriasSheet No. 2 of 4Date : April 21, 1987

Checked by : _____

ESTIMATE FOR: Reparaciones generalesPROJECT NO.: (S-0113-0-52 (Insertco Corp. -- San Germán

ORDER NO.	QUANTITY	UNIT OF MEASURE	I T E M	Unit Price	T O T A L
11	8	c/u	Instalar cerraduras Yale BW\$01US26D o Corbin 836-410-US260 - igual o similar	\$ 35.00	\$ 280.00
12	4	C/U	Instalar amortiguadores de puerta, "Yale Series 70, SB #74 with #209 bracket", igual o similar		
13	156	C/U	Instalar operadores de ventanas 'Heavy duty' (ver especificaciones técnicas Sección 13).	6.00	936.00
14	2	C/U	Instalar 'fog nozzle, bronze size 1 1/2" NST. (100'-0")	30.00	60.00
15		L.S.	BAÑO DE DAMAS: Limpieza general incluyendo equipo sanitario, piso, paredes, plafón, lavado a presión	125.00	125.00
16	104	yd. cua.	Pintura interior de paredes con 'epoxy' hasta el plafón, pintura aprobada por CFI	4.50	468.00
17	61	yd. cua.	Pintura de plafón, dos aplicaciones.	2.50	152.50
18	76	yd. cua.	Pintura de divisiones de inodoros existentes de hormigón incluyendo puerta. Pintura aprobada por CFI	5.00	380.00
19	10	C/U	Instalar válvulas de inodoro, '1110 FVY Sloan Royal Flush Valve' igual o similar	105.00	1,050.00
20	11	C/U	Instalar asientos de inodoro, 'Moltex No. 5320.114 - Black', igual o similar	20.00	220.00
21	1	c/u	Instalar lavamanos 'American Standard Regalyn Catalog No. 4867.024 wall hanger, 20" x 18" (enamel cast iron), with supply fitting No. 2248.219, igual o similar	235.00	235.00
			INITIAL HERE		
			G.R.		

PRIDCO
P-4202Commonwealth of Puerto Rico
PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY
San Juan, Puerto Rico

SCHEDULE "B"

PROJECT ESTIMATES

Computed by: Ing. Miguel A. AriasSheet No. 3 of 4Date: April 21, 1987

Checked by: _____

ESTIMATE FOR: Reparaciones generalesPROJECT NO.: S-0113-0-52 (Insertco Corp.) San Germán

ORDER NO.	QUANTITY	UNIT OF MEASURE	I T E M	Unit Price	T O T A L
22	10	C/U	Instalar mezcladora 'heritage spread		
			faucet with crown handles and grid		
			drain, 2248-219. (igual o similar)	\$ 105.00	\$ 1,050.00
23	4	C/U	Instalar operadores de ventanas	6.00	24.00
			BAÑO DE CABALLEROS:		
24		L.S.	Limpieza general incluyendo equipo		
			sanitario, piso, paredes y plafón.		
			Lavado a presión.	125.00	125.00
25	84	yd.cua.	Pintura interior de paredes en		
			'epoxy' hasta el plafón, pintura		
			aprobada por CFI	5.00	420.00
26	48	yd. cua.	Pintura de plafón. Pintura aprobada		
			por CFI	2.25	108.00
27	76	yd. cua.	Pintura de divisiones de inodoros		
			existentes de hormigón. Pintura		
			aprobada por CFI.	5.00	380.00
28	11	c/u	Instalar válvulas inodoro. Véase		
			baño damas	105.00	1,175.00
29	11	c/u	Instalar asientos de inodoros.		
			Véase baño de damas.	20.00	220.00
30	9	c/u	Instalar mezcladora. Véase baño damas	105.00	945.00
31	2	c/u	Instalar urinal 'American Standard'		
			alta F-6240 - igual o similar	190.00	380.00
32	2	c/u	Instalar tapa drenaje de piso	5.00	10.00
33	1,350	yd. cua.	-- EXTERIOR -- Lavado a presión de paredes	.20	270.00
34		L.S.	Resanado de paredes	125.00	125.00
35	1,008	yd. cua.	Pintura exterior, dos aplicaciones		
			pintura aprobada por CFI. Garantía		
			en decoloración de 2 años	2.25	2,268.00
36	6	c/u	Instalar 'bumper' de goma de 10" x 22"	100.00	600.00

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Computed by: Ing. Miguel. A. Arias

ESTIMATE FOR: Reparaciones generales

PROJECT NO.: S-0113-0-52 (Insertco Corp.) San Germán

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